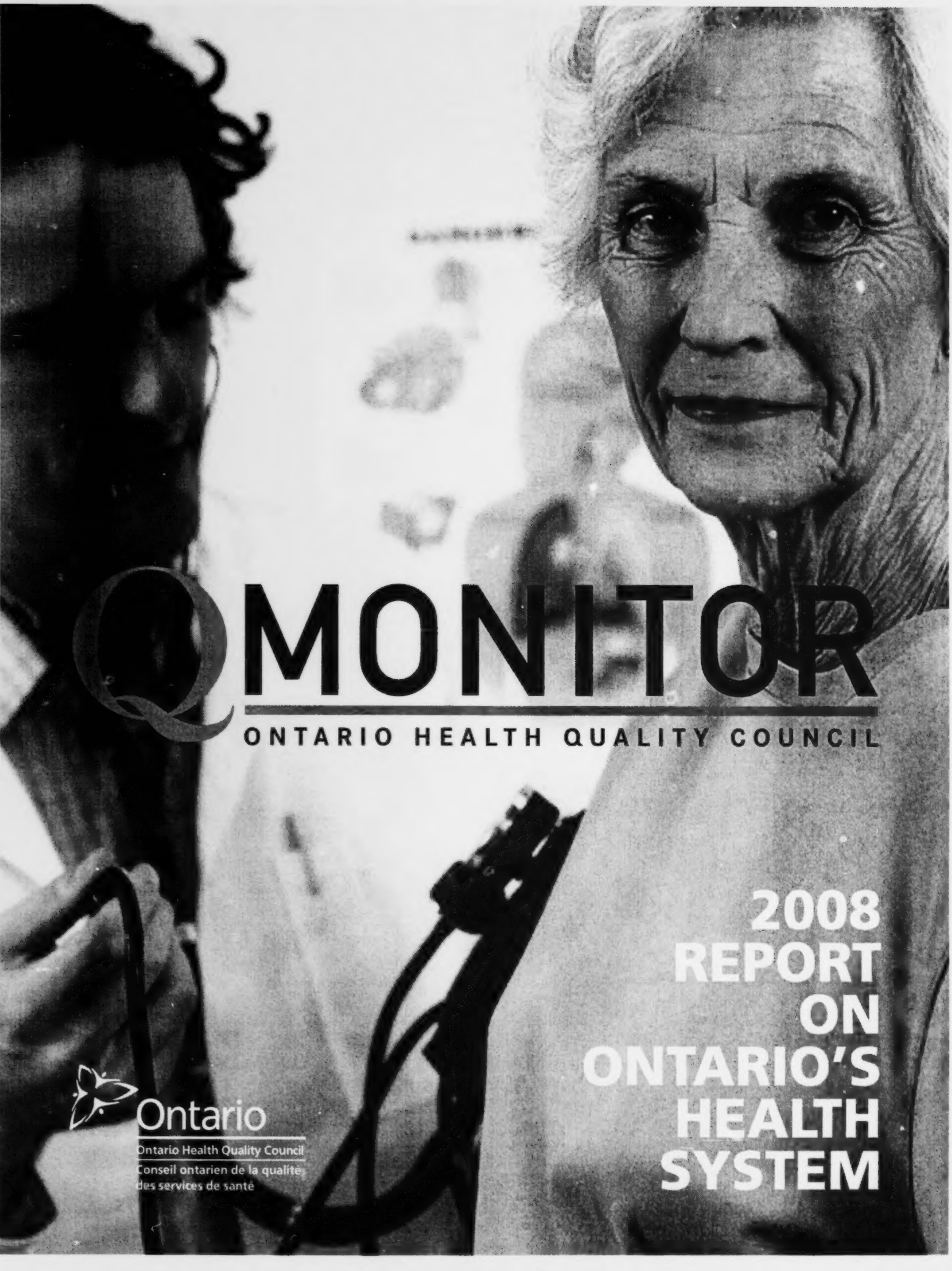

QMONITOR

ONTARIO HEALTH QUALITY COUNCIL

2008 REPORT ON ONTARIO'S HEALTH SYSTEM

Ontario
Ontario Health Quality Council
Conseil ontarien de la qualité des services de santé

2008-03737/

The quality of our health system is the responsibility of every Ontarian. We hope this report will help you understand the publicly funded health system better, and give you the information you need to keep up pressure for improvement.

After all, it's your health and your health system.

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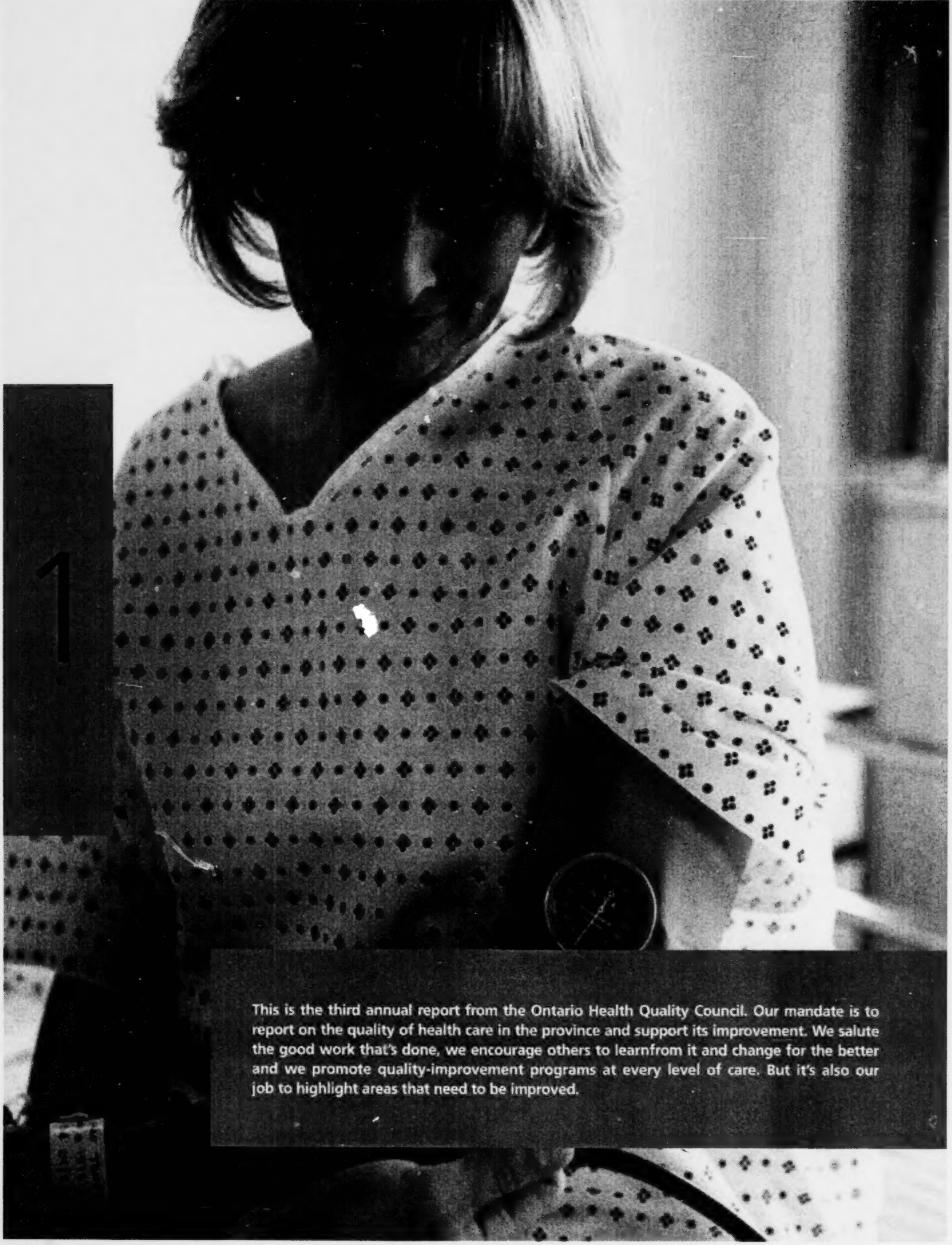

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This is the third annual report from the Ontario Health Quality Council. Our mandate is to report on the quality of health care in the province and support its improvement. We salute the good work that's done, we encourage others to learnfrom it and change for the better and we promote quality-improvement programs at every level of care. But it's also our job to highlight areas that need to be improved.

INTRODUCTION AND SUMMARY

Ontario's publicly funded health-care system costs billions of dollars to operate and touches millions of lives every year. It routinely delivers care that was unimaginable a generation ago and difficult a decade ago. That care is provided by dedicated staff and professionals who work long and hard to help people who are often very sick and very frightened. They do a remarkable job, especially in the face of our health system's undeniable flaws.

This is the third annual report from the Ontario Health Quality Council. Our mandate is to report on the quality of health care in the province and support its improvement. We salute the good work that's done, we encourage others to learn from it and change for the better and we promote quality-improvement programs at every level of care. But it's also our job to highlight areas that need to be improved.

We began our work by looking at what Ontarians want from their health-care system. We asked and found the people of Ontario share a common vision; we all want a system that is accessible, effective, safe, patient-centred, equitable, efficient, integrated, focused on population health and has the appropriate resources to get its work done. We call these the *nine attributes of a high-performing health system*. Every year we look at indicators — aspects of health care we can measure and keep track of — for these nine attributes and report on them. (The technical specifications for all the indicators in this report can be found on our website — **www.ohqc.ca**.)

We also take a look every year at an area we know needs improvement. Last year we talked about the critical need to manage chronic disease better; this year we take a much closer look at how this could be done for people living with two chronic conditions: coronary artery disease and diabetes.

The story so far—findings in earlier reports

We've said every year the Ontario health system's poor record in using information technology hurts our ability to deliver better and safer health care. You'll find examples of this throughout the report — but it is no small issue that this lack of information also limits the council's ability to do our work properly.

The kind of data we need to measure and assess care and its impact are hard to find and can be difficult to interpret, if they exist at all. As a result, you'll find some indicators we reported on last year don't appear this year because no new information has been gathered since then. This makes it difficult to see if things are getting better or worse over time. It also means that we sometimes have to use measures that don't directly refer to the problem we want to talk about, just because that's the best information we have to measure a certain attribute.

We're not alone in our belief that lack of progress in information technology and management (often referred to as e-health) is in the way of progress in health care. In a paper released in January 2008, the Ontario Hospital Association said "True health system transformation depends upon improving the flow of both patients and their health information through the health-care system," but noted the "current funding environment does not effectively support the adoption, collaboration and integration necessary to enable the timely realization of e-health's true value."[1] During last fall's election Ontarians were promised "an electronic health record by 2015"[2]; at time of writing, we await announcement of a plan to achieve it. Some aspects of health care we reported on last year looked good — the Ontario Wait Time Strategy was succeeding in cutting waits for cancer care, cardiac care, hip and knee replacements, diagnostic imaging and cataract surgery. More heart-attack patients who were admitted to hospital were surviving for the critical 30 days after their attack, up to 88.9 percent from 85.5 percent over six years. Survival rates for all cancers improved, significantly so for people with breast, ovarian or prostate cancer.

But at the same time, we found we're doing badly on providing the proper care to people with chronic diseases, the illnesses people suffer from for years, like diabetes or heart disease. We found smoking — a significant factor leading to chronic disease — is declining, but obesity, another key factor, remains a serious problem. We found that some groups, in particular Aboriginal Ontarians and people from some immigrant communities, were significantly more likely to develop chronic diseases. At the same time, we found these groups had greater difficulty in accessing care. Ontarians were also promised "help [for] the one in three Ontarians living with a chronic illness, starting with diabetes"[2]; again, at time of writing, we await announcement of a plan to do this.

The picture this year

Our 2008 review of the nine attributes of a high-quality health-care system was prepared by researchers from the Institute for Clinical Evaluative Sciences in Toronto, based on administrative data from their holdings, the Primary Care Access Survey — done for the government of Ontario by the Institute for Social Research at York University, the Commonwealth Fund 2007 International Health Policy Survey, among others.

The nine attributes of a high-performing health system

Accessible

People should be able to get the right care at the right time in the right setting by the right health-care provider.

To measure how accessible the health system is, we looked at how many people have family doctors, what the waiting time is for specialized services and in emergency departments and to what extent patients can use communications technology to get care. In surveys, 92 percent of people in Ontario said they have a family doctor, but that number drops to 86 percent for immigrants who have lived here less than five years. At the same time, only 10 percent of Ontario family physicians are taking new patients, down from 40 percent seven years ago. It's also hard to see a doctor when you do have one: only 39 percent of Ontarians who need to see their doctor can do so that day or the day after — far lower than in other countries in the survey.

It's good news that waits for key surgeries and CT scans have decreased and that use of telemedicine is increasing. But we're deeply concerned that although the number of MRI scans has almost doubled, waits are no shorter. This raises some important questions. Are doctors ordering MRIs when they're not really necessary? What kind of standards are there for assigning priority to competing demand for the service? Is priority determined by patient need, or by the type of doctor who ordered it? In some places, waits are much shorter than in others — should the supply be managed collectively, perhaps by the local health integration network, so it's not just luck whether a patient suffers for months or gets a scan quickly? Does a serious shortage of MRI capacity remain? MRI scans are among the first problems tackled by the Wait Time Strategy. We would not want to see this failure to shorten waits for MRIs overlooked because most of the strategy is working well.

Effective

People should receive care that works and is based on the best available scientific information.

Knowledge, treatments and technology are always advancing in health care; the ability to use them all effectively is key to a high-performing health-care system. This year, to assess effectiveness, we looked at what percentage of patients died while in hospital for heart attack or stroke, how often children with asthma had return visits to emergency departments, how many people died shortly after hospital treatment for heart attacks or heart failure and how many newly diagnosed diabetes patients are getting proper care.

We are doing better on some types of heart problems. Fewer people are dying in the 30 days after a heart attack. Fewer people have to go to emergency or back to hospital after a first heart attack or diagnosis of coronary artery disease. But people with coronary artery disease are only getting two-thirds of the right drugs and tests — and women get much less care than men.

There's the same kind of mixed success with diabetes. Fewer diabetic patients are going to emergency because their blood sugar is off track, but more than half don't have their blood sugar or blood pressure under control. Overall, people with diabetes are getting less than half the care recommended by experts. Long-term failure to manage diabetes can have serious consequences including heart attack, strokes, kidney failure, amputation and premature death.

Safe

People should not be harmed by an accident or mistakes when they receive care.

Care is supposed to make us healthier. But too often patients are hurt unnecessarily during treatment, such as when seniors fall while in institutional care, or patients get infections resulting from an operation. High-quality care doesn't let these preventable injuries happen.

We found the rates of life-threatening blood clots and infections patients pick up in hospital have changed little over five years. We also looked at falls by residents in long-term care — about one in 10 have falls so bad they have to go to emergency and that number is not improving. Too many seniors are being prescribed drugs that may be bad for them. More than 120,000 Ontarians aged 65 and over (seven for every 100 nursing home residents and eight for every 100 seniors living in the community) got prescriptions for drugs that at best did no good and at worst had the potential to harm them.

Patient-centred

Health-care providers should offer services in a way that is sensitive to an individual's needs and preferences.

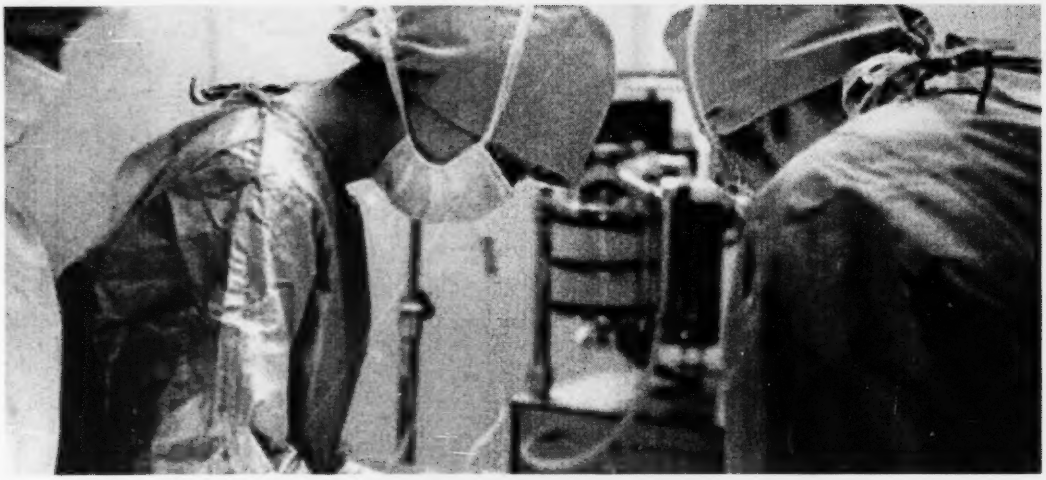
Ideally, providers treat patients with respect and consult them on their care. But being sensitive to an individual's life circumstances — such as their family situation, religious needs and language differences — is not easy, and we lack measures to judge if it's being done. For this report, we used satisfaction surveys as our measure of patient-centred care. We look at people's experiences with physicians in the community, in acute-care hospitals and, separately, in emergency wards.

Overall, the rates of satisfaction are not bad. Ontarians are about as satisfied with the quality of care they get from their regular doctor as people surveyed across seven countries. Three-quarters say they've had excellent or very good care from their doctor in the last 12 months, and the same percentage said their doctor explained things in ways they could understand. Acute-care hospitals and emergency wards have seen little change in their patient satisfaction ratings since 2003/2004.

Equitable

People should get the same quality of care regardless of who they are and where they live.

A high-performing health-care system gives care according to need, but many factors affect who gets what care in Ontario. The province's size means many people live far from specialists, technology and even everyday care.



Others may not get the care they need because they don't speak either English or French or because of their age, sex, income level or ethnicity.

Each year we examine this important attribute from a different perspective. Last year we looked at equity as it related to Ontario's Aboriginal and immigrant populations. This year we compare care received in rural areas with care in urban areas. Although there are also differences between rural and remote areas, we did not look at this aspect.

We were happy to see that whether you live in an urban or rural community makes little difference in whether you have a family doctor, get CT scans or cataract surgery or die of congestive heart failure. Satisfaction rates with care are about the same, too. Whether country, town or city dwellers, chronically ill or not, about 93 percent of Ontarians are satisfied with their care when sick.

Rural residents, however, are less likely to get MRI scans and urban residents are less likely to have a hip or knee replacement. Elderly rural residents are more likely to be taking inappropriate medication.

Efficient

The health system should continually look for ways to reduce waste, including waste of supplies, equipment, time, ideas and information.

Whether we can keep paying for our health-care system is a constant concern for the people of Ontario. That's why it's important for the health-care system to run as efficiently as possible, cutting waste and using resources wisely.

We looked at three things to assess waste in Ontario's health system: visits to emergency departments for problems that could have been handled in a doctor's office, unnecessary tests for people having cataract surgery and using expensive drugs to treat high blood pressure where a cheaper one is the recommended choice for many people.

Research tells us emergency visits by people with minor problems are a small percentage of all emergency department visits and have little impact on how long sicker people wait. We're pleased they've dropped over five years from three percent of emergency visits to 2.6 percent. However, there were still 300,000 of them in 2006/2007. Some of these visits can't be avoided — in rural areas there may be no other place to go for after-hours care. But the cost of them adds up — and it's money that could be better used.

It's been the practice for years to do heart tests and lung X-rays on people getting a routine cataract operation — at an estimated cost of $35 per person. That's a lot of money to spend on tests that don't improve results for patients. The rates for both are going down but are still far too high.

High blood pressure affects a great many people, including a lot of seniors, whose drug costs are mostly paid by the province. Most people could be treated with inexpensive drugs called thiazides (often referred to as "water pills" or diuretics) (although they're not recommended as the first choice for patients who also have certain other conditions such as diabetes, coronary artery disease, chronic renal disease, stroke or heart failure). But doctors consistently prescribe more expensive drugs that don't make patients any better but do use up money that could be spent on other things. All these relatively minor examples of wasted money can add up to a big impact on the affordability of health care.

Appropriately resourced

The health system should have enough qualified providers, funding, information, equipment, supplies and facilities to look after people's health needs.

When we talk about having the appropriate resources for health care, we don't mean just money. We mean the right mix of funding, workers and equipment. New technology can improve care and even save money — but only if there are properly trained technicians to run it and professionals to guide its use, interpret results and fit it into overall care.

The Ontario government has made a commitment to hire more health workers and increase training places for them. There are more places for medical students and for international medical graduates. Nursing schools have expanded enrolment and there are more trainee pharmacists and midwives as well. The downside is it will be some years before these students are ready to start providing care.

As we mentioned, information technology is essential for high-quality care, but very few hospitals — only some of the biggest — have electronic information systems throughout their operations. Small hospitals have lagged on developing the computer systems necessary for up-to-date high-quality care.

Keeping track of spending and what it gets us in terms of the health of Ontarians is another way to judge how appropriate our use of resources is. We are spending more than we did a decade ago. The total — including health-care spending by government, individuals and insurance companies — equals about 10.9 percent of gross domestic product, compared to 8.6 percent in 1997.

Integrated

All parts of the health system should be organized, connected and work with one another to provide high-quality care.

"Integrated care" means the different parts of the system serving patients are linked, so people get maximum benefits and crucial treatments aren't missed. Generally, the sicker people are, the more care they get, from many providers. Care can be wasted or even do harm if providers don't know what other treatments patients need or get, or when follow-up care isn't organized.

To measure integrated care in Ontario, we looked at rehabilitation services for stroke patients and whether people know whom to contact when they are discharged from hospital. The results aren't great. We know stroke patients who get into rehabilitation programs quickly do better, but less than a third of patients go straight from hospital to rehab. Only four out of five patients leaving hospital, and three out of five leaving the emergency department said they knew who to call for help after leaving.

Focused on population health

The health system should work to prevent sickness and improve the health of the people of Ontario.

Looking after people once they get sick is important, but of course it would be much better to keep them healthy. Years of work to get people to stop smoking is paying off in lower rates of lung cancer; cancer death rates are dropping because we're getting better at detecting, treating and preventing it.

Prevention, in short, is key to a healthy population and every year we look at some measures to see if we're improving the overall health of the population. Vaccinating people against diseases was one of the earliest efforts to do that, and is now so common we sometimes take its impact for granted. But we're pleased Ontario is doing pretty well inoculating against flu. More than three-quarters of elderly people, and half of people with chronic disease — people who can be killed by flu — got flu shots last year. Ontario is ahead of most provinces on this, but we could do better.

We could certainly do better on all the other measures we checked for population health. Only 60 percent of women aged 50 and over get mammograms, which detect breast cancer. We're a long way from screening people over 50 to detect colon cancer early — available data tells us about one in six has a fecal occult blood test.

A quarter of Ontario's poorest citizens don't know where their next meal will come from and half of us — no matter what income we have — don't eat enough vegetables. Too many people with chronic diseases smoke and are overweight. These problems are often closely linked to social and economic status, but we could help the people who have them live healthier lives with supportive community programs.

Chronic disease management

Chronic disease has a huge impact on the people of Ontario. One in three of us suffers from chronic disease — the illnesses that people live with for years, such as heart disease, emphysema, diabetes and arthritis. Eighty percent of Canadians who are older than 65 have some form of chronic disease and of those, about 70 percent suffer two or more.[3] According to the World Health Organization, an estimated 89 percent of all deaths in Canada are caused by chronic disease.[4] WHO research puts the cost of medical treatment for chronic diseases, and the lost productivity they cause, at $80 billion annually in this country.[5]

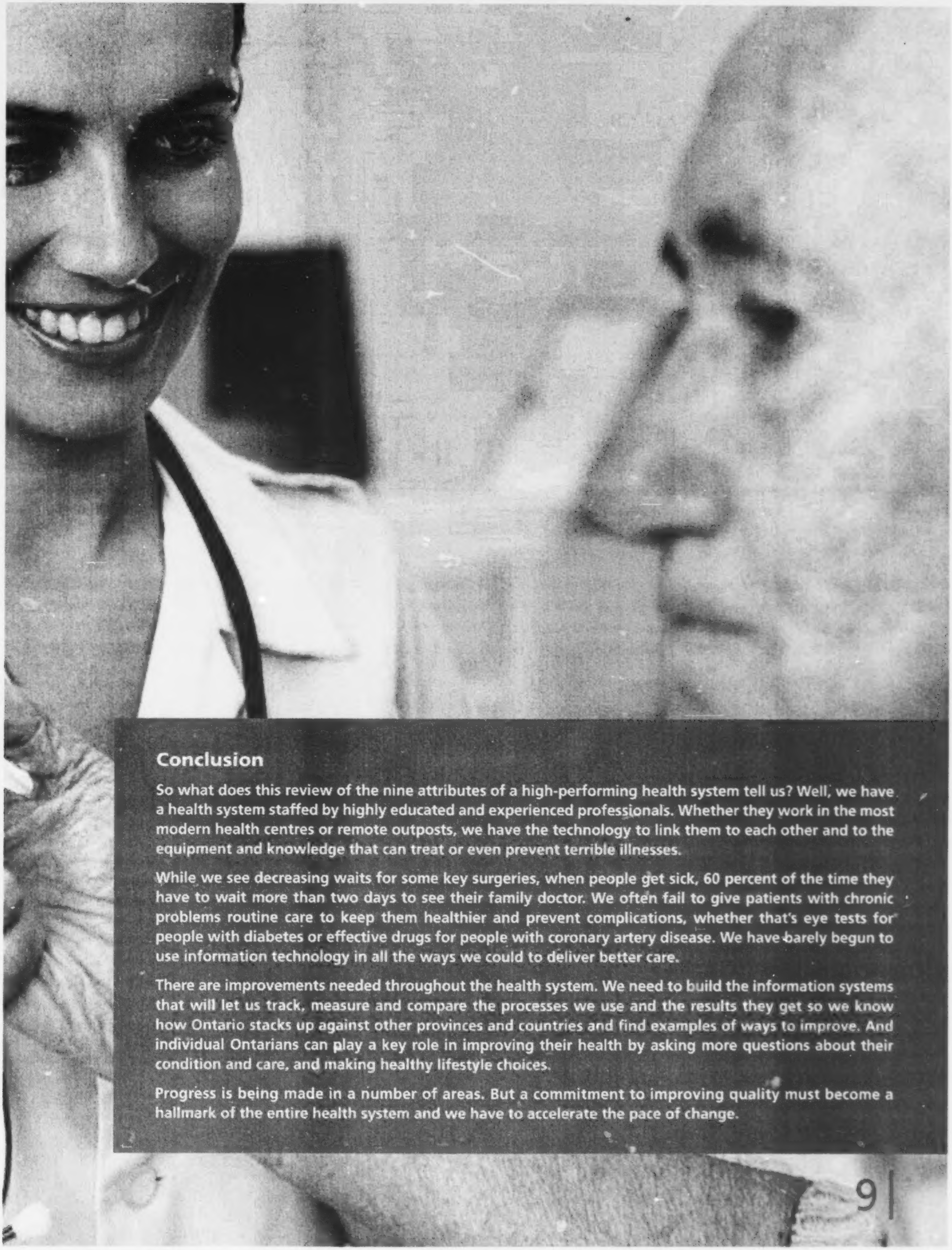
But in most cases chronic disease symptoms can be managed and the suffering they cause controlled, allowing people to lead more normal lives. We know a great deal about how to prevent chronic disease and we're well-informed on the tests, medications and monitoring we need to do to keep people with chronic diseases living fairly normal lives in their communities. Most of these aren't complex treatments. But they need to be consistently offered.

Quite simply, Ontario is failing to meet the challenge of chronic disease. Close to 8,000 lives could be saved annually — and the quality of life improved for many more people — if we did a better job of delivering the all-important regular care and monitoring that prevents the chronically ill from falling into severe bouts of illness.

Less than half of individuals with diabetes have their blood sugar under control. Most are not getting foot exams, eye exams or periodic monitoring of blood glucose frequently enough. Almost half are not getting the recommended medication. Only five percent of diabetes patients received all of the desired care at the same time.

We do a little better with coronary artery disease, but there is still significant room for improvement. Three-quarters of patients were recommended aspirin. Just under two-thirds of patients were recommended beta-blockers — drugs that reduce demand on the heart and reduce blood pressure. A similar proportion was recommended statins — drugs that reduce cholesterol. In theory, all patients with coronary artery disease should at least be considered for each of these three treatments. But just one in three is considered for all three drugs. And it's disturbing that women with coronary artery disease are much less likely to get the recommended care than men.

We were interested to see that primary-care practices where nurse practitioners work alongside family doctors generally did a better job of caring for people with chronic disease than practices where family doctors work alone. But no type of practice is using information technology effectively for managing chronic disease. There's no question that a big part of the problem in chronic disease management is the failure to use information technology effectively to keep track of tests, medications and regular monitoring. Without that kind of information, we can't develop and encourage plans for improving care. Ontario needs to find a way to make this happen. The Ontario government has promised to introduce a chronic disease strategy. We look forward to that strategy and its implementation.



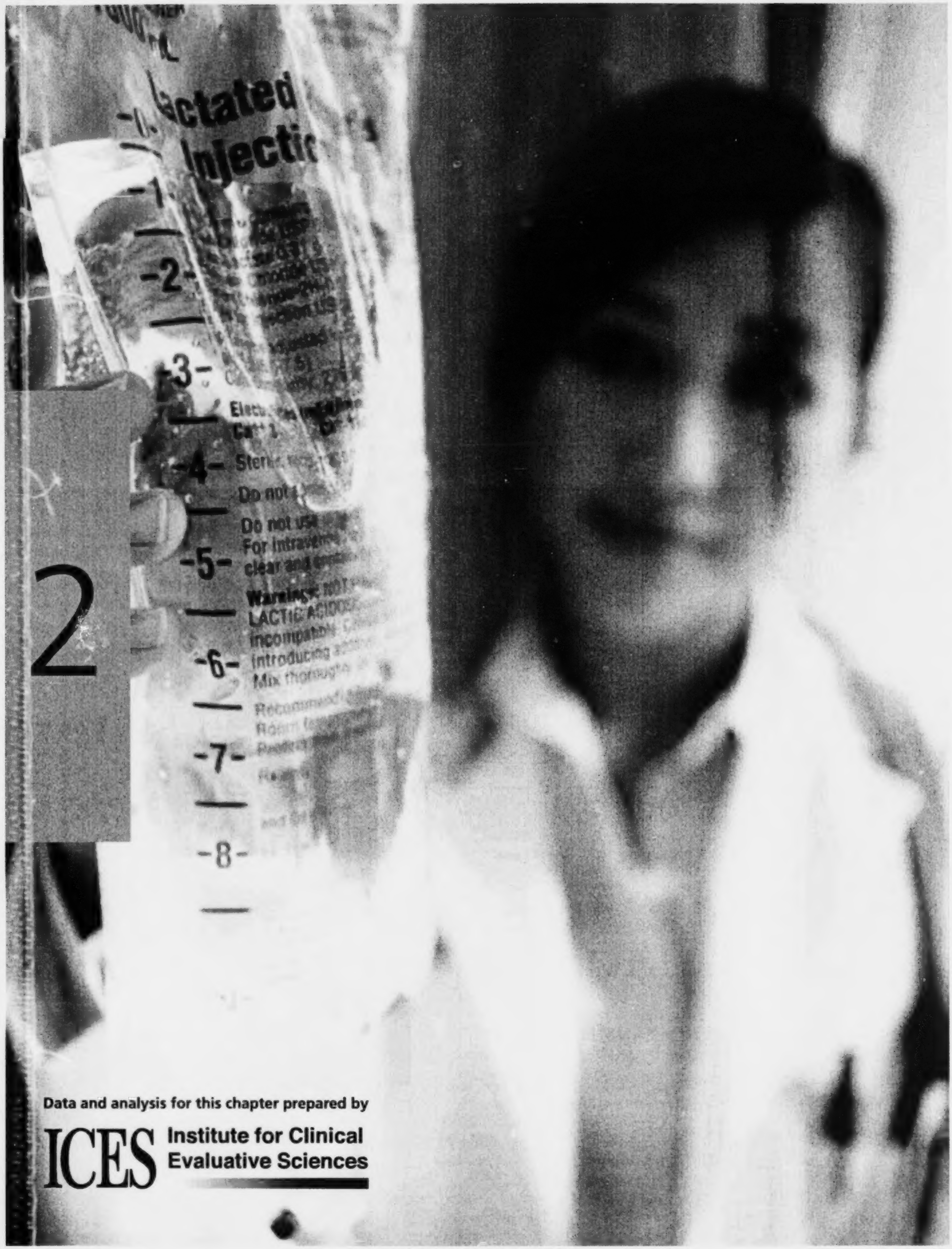
Conclusion

So what does this review of the nine attributes of a high-performing health system tell us? Well, we have a health system staffed by highly educated and experienced professionals. Whether they work in the most modern health centres or remote outposts, we have the technology to link them to each other and to the equipment and knowledge that can treat or even prevent terrible illnesses.

While we see decreasing waits for some key surgeries, when people get sick, 60 percent of the time they have to wait more than two days to see their family doctor. We often fail to give patients with chronic problems routine care to keep them healthier and prevent complications, whether that's eye tests for people with diabetes or effective drugs for people with coronary artery disease. We have barely begun to use information technology in all the ways we could to deliver better care.

There are improvements needed throughout the health system. We need to build the information systems that will let us track, measure and compare the processes we use and the results they get so we know how Ontario stacks up against other provinces and countries and find examples of ways to improve. And individual Ontarians can play a key role in improving their health by asking more questions about their condition and care, and making healthy lifestyle choices.

Progress is being made in a number of areas. But a commitment to improving quality must become a hallmark of the entire health system and we have to accelerate the pace of change.


Injection
-1-
-2-
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Do not
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Warnings
LACTIC ACIDOSIS
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Data and analysis for this chapter prepared by

ICES Institute for Clinical Evaluative Sciences

HOW IS ONTARIO'S PUBLICLY FUNDED HEALTH SYSTEM PERFORMING?

2.1 Accessible

2.1.1 Overview

A high-performing health system should provide you with the care you need, when you need it. For some, good access means that care should be available right away when there is a troubling new symptom or problem that needs to be diagnosed and treated. Delays in diagnosis or treatment can increase anxiety, prolong or increase suffering, or in some cases increase the risk of death.

For others, however, good access means getting routine, regular care, or check-ups on schedule. Infants should have regular well-baby visits to check for problems and be given their shots. Women need regular Pap tests and people aged 50 and over need to be screened for colon cancer. People with diabetes need regular follow-up to make sure their blood sugar, blood pressure and cholesterol are under control. These repeat visits are not urgent, but when people need them, they should not have to wait longer than the recommended time and they should have easy access to the practitioner who knows them best.

Another dimension of good access is having a family doctor who knows you and your health history and problems. This doctor acts as the gatekeeper to the rest of the health-care system, helping you access the right care if you need to see a specialist, or have surgery or a special test. That's why having a regular doctor — and being able to see her or him when you need to — is such an essential part of a high-performing health system.

There is a fourth aspect to access: being able to get services conveniently. Having to travel long distances can be a barrier to getting necessary care. Waiting needlessly on the phone to talk to one of your care providers or their staff can hinder access, especially when the problem could have been handled by e-mail.

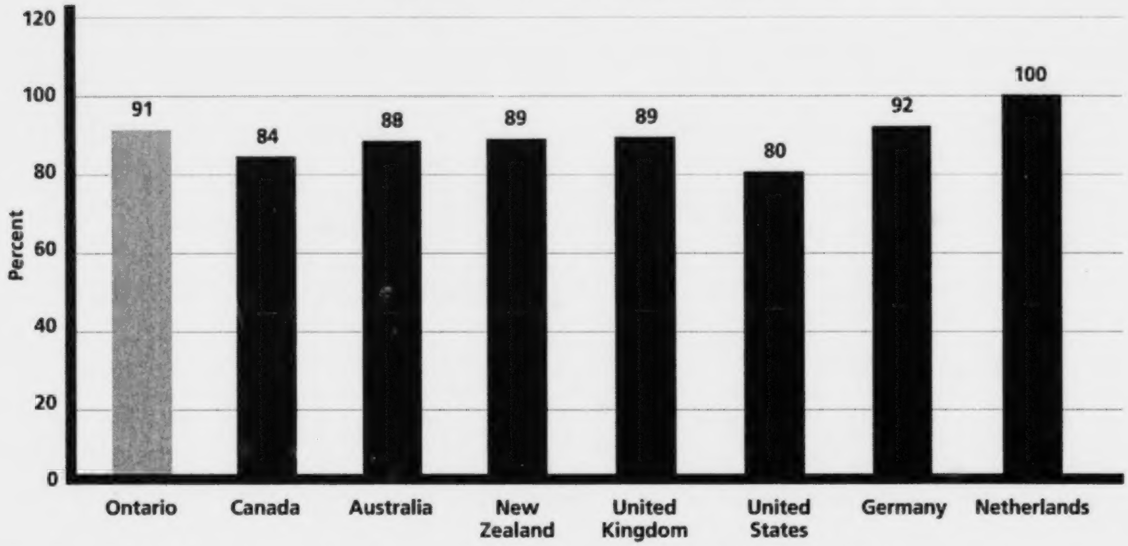
This year's report examines several aspects of access:

- Access to a regular doctor
- Access to CT and MRI, for diagnosis
- Access to specialized surgeries (cardiac bypass and angioplasty, cataract surgery, and hip and knee replacements)
- Access to emergency departments for urgent conditions
- Access to technology that makes it convenient to seek health care, such as telemedicine (video access to a health professional), e-mail and Telehealth (telephone advice from a nurse)

People should be able to get the right care at the right time in the right setting by the right health-care provider.

High-quality access means that if you need a special test, you can get it promptly and without extra strain and upset. If you have a chronic illness, such as diabetes or asthma, you should be able to find help to manage your disease and avoid serious problems.

Percentage of adults who have a regular doctor or place of care, in Ontario and by country, 2007



Note: Country-level data is weighted to reflect demographic composition from the latest census; Ontario-level data is not weighted

Source: Health Council of Canada, 2007; Commonwealth Fund 2007 International Health Policy Survey of the General Public's Views of their Health Care System's Performance in Seven Countries.

2.1.2 Gateway to health care — access to a family doctor

A regular doctor is the foundation of primary care. He or she is the first point of care if you're sick, the best place for routine check-ups, screening tests, health counseling, and the hub from where referrals are made for specialized service. That's why it worries us to hear about people who can't find a family doctor and that's the first thing we looked at.

We used two surveys that asked similar questions to determine the proportion of people in Ontario that has a regular doctor. One is the Primary Care Access Survey, conducted regularly by the Institute for Social Research at York University for the Ontario government. It lets us track whether the number of Ontarians who say they have a regular doctor is changing over time. The other is the Commonwealth Fund 2007 International Health Policy Survey, which lets us compare Ontario to six other countries (Australia, New Zealand, United Kingdom, United States, Germany and the Netherlands). The two surveys came up with similar numbers in the year in which they overlap, which suggests both are accurate.

The Primary Care Access Survey found 92 percent of adults had a regular doctor in 2006 and 2007 — in other words, no change over time. The 2007 Commonwealth Fund survey reported that 91 percent of Ontarians had one. That's better than in Canada as a whole, where only 84 percent of respondents said they had a regular doctor. The Ontario figure of 91 percent is similar to other countries in the Commonwealth Survey, except for the United States, where the percentage is lower than Ontario, and the Netherlands, where it's 100 percent, an unusually high number that may be due to recent reforms in health insurance.

Although we seem to be doing better than the rest of the country in having family doctors, and the percentage that does have them is similar to other countries, it's worrying that about eight percent, or one in 12 adults in Ontario don't have a family doctor. According to the Primary Care Access Survey, about half of these individuals aren't seeking a family doctor. That still leaves about four percent of adults in Ontario, or close to 400,000 people, who want a doctor, have tried to find one, but can't. A different survey of doctors shows that only about 10 percent of family doctors are taking new patients, down from 40 percent seven years ago.

The Primary Care Access Survey was not large enough to tell us about what is going on in individual communities. There are likely some places where more people are without family doctors. This survey does tell us, however, that new immigrants (in Canada less than five years) are less likely to have a family doctor — only 86 percent say they do.

In the Speech from the Throne, delivered November 29, 2007, the provincial government said it would try to get 500,000 more Ontarians "access to improved family care from doctors, nurses and other health-care professionals." It was good to hear the government set a specific target, but if it takes three years to accomplish, access for another 500,000 people will only be keeping up with population growth; there will still be people who want a doctor and can't find one. There are also some regions where it's harder to get a doctor than others, and people who live in them may need extra help to find care.

The Commonwealth Fund survey asked an important follow-up question: if you do have a family doctor, how long do you have to wait for an appointment when you get sick? Having a doctor is important, but if you can't get in to see him or her quickly when you need to, you may get worse and require more care in the long run.

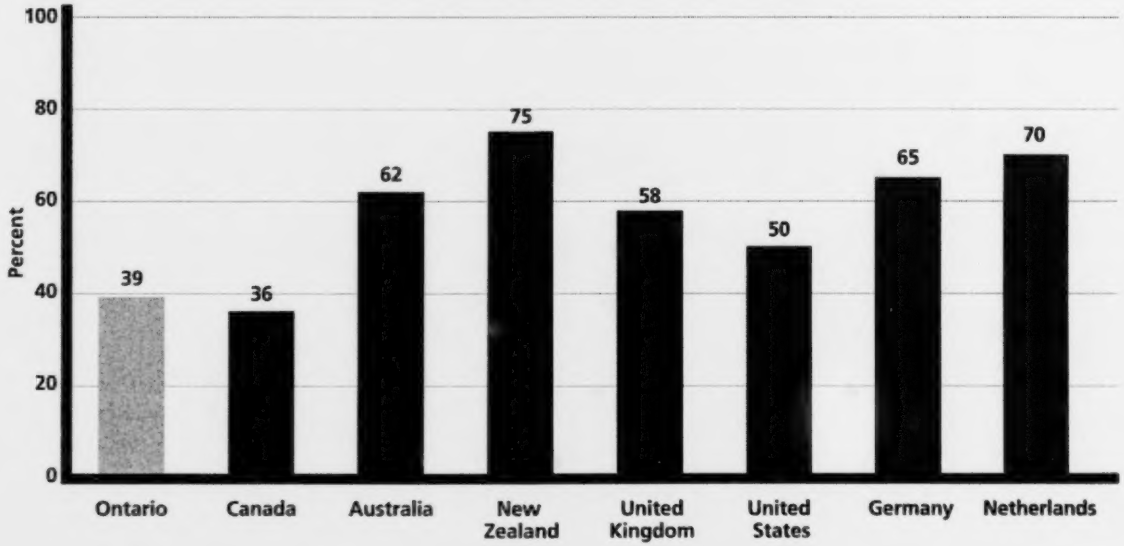
That may be happening too often in Ontario. The Commonwealth Fund survey found less than 40 percent of people say they can see their doctor the day they call or the next day. That's similar to Canada overall, but much lower than all of the other countries surveyed, where more than half the respondents could see a doctor the day they called or the day after. The highest proportion was in New Zealand, where 75 percent of respondents saw a doctor within two days when they were sick.

So although Ontarians are as likely to have a regular doctor as people in other countries, they are far less likely to get prompt care from their doctor. A recent report by the Health Council of Canada found also care is not always well-coordinated, comprehensive or available when needed.[7]

Increasingly, in Canada and around the world, new approaches to managing practice are focusing on co-ordinating care among a team of physicians and other health professionals. Such approaches may result in better care for the patient and more efficient use of the family physician's time.

One important strategy for reducing wait times to see a family doctor is advanced access scheduling. This approach

Percentage of adults who could get a doctor's appointment the same day or next day the last time they were sick or needed medical attention, in Ontario and by country, 2007



Note: Country-level data is weighted to reflect demographic composition of the country from the latest census; Ontario-level data is not weighted

Source: Health Council of Canada, 2007; Commonwealth Fund 2007 International Health Policy Survey of the General Public's Views of their Health Care System's Performance in Seven Countries

Care when it's needed, so you need less care

Rexdale and Lawrence Heights are two community health centres in Toronto that were seeing waits grow longer. Community health centres offer team care and their clientele tends to be people who face barriers getting care — many are recent immigrants or chronically ill and poverty is a problem for many. Lawrence Heights patients were waiting 30 days for an appointment in April 2003. At the very least, that's stressful, but it's also unlikely patients are getting the care they need when it's delayed that badly. The centre temporarily hired some extra doctors to help clear the backlog, and saved all afternoon appointments (about 57 percent) for same-day needs. By December 2004, patients waited less than a week for a planned appointment and were seen the same day for sudden illnesses. Rexdale, using a similar approach, was able to cut wait times from six weeks to see a doctor and four to see a nurse practitioner to either same day, next day or one week later.

Both centres say that to implement advanced access, you need to understand your community's needs and expectations so you can create a schedule that serves patients well, plus a staff champion to lead change management. You also need to understand the needs of your health centre staff, and support them to be flexible and open to change.

to scheduling aims to get patients seen on the day they want, even if that's the same day they call. To do that, clinics try to offer appointments according to when people are most likely to want one. Many doctors find Mondays are busiest, for example, so clinics keep appointment slots open for quick care. Advanced access also requires managing demand for visits, such as handling minor issues over the phone, rather than bringing a patient in when it isn't really necessary. To move to advanced access, clinics usually have to open extra hours or hire temporary help for a short time to clear the backlog of patients waiting for appointments. Then they keep a certain percentage of every day's appointments open to see patients with urgent health issues. Routine care is scheduled, but not far in advance, which means far fewer people miss appointments and less time is wasted. That, in turn, means people with chronic illness are much more likely to get the regular monitoring they need.

Implementing advanced access requires training and support. In Britain, advanced access has been part of the National Health Service's goals since 2000, and "learning collaboratives," where clinics interested in access get together to share ideas about how to implement it are common. Alberta and Saskatchewan have also introduced advanced access to family practices, using similar collaboratives.

Comparisons from around the world and examples from here in Canada tell us we need to know more about what is keeping people from getting primary care when they need it. We need to learn more about why it's hard to get a doctor and more about waiting times and what happens to people when care is delayed. Reforming primary care so it meets the needs of Ontarians in the 21st century can only happen when we have a better understanding of all these questions.

2.1.3 The waiting game — access to specialized services

Public concern over waiting lists for specialty health care never really goes away. If we haven't faced a wait ourselves, or worried over a friend or family member who's going through it, we can imagine what it would feel like to be sick and waiting for care. So there was a lot of relief in September 2004 when Ontario, the other provinces and territories and the federal government signed a 10-year plan for strengthening health care. Included in it was $5.5 billion from the federal government to reduce waits in five areas — heart surgery, cancer surgery, joint replacement, cataract surgery and diagnostic (MRI and CT) scans.

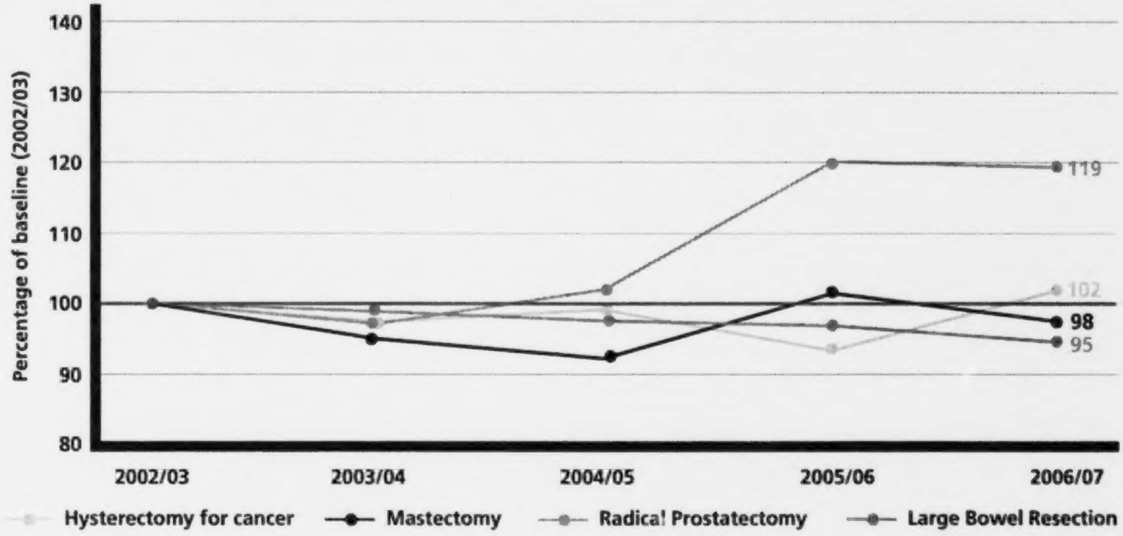
Two months later, the province announced the Ontario Wait Time Strategy. The strategy's goal was to increase services and reduce wait times in these five areas by December 2006 (and for a broader range of services after that). The Wait Time Strategy measures a wait as the time by which 90 percent of people receive the service. For surgery, measurement starts when a patient and surgeon decide to proceed with the operation. For MRIs and CTs, the measure is the time between the scan being ordered and when it's done. So for an MRI, a "90th percentile wait time" of 75 days means that nine of 10 patients got an MRI within 75 days of it being ordered (which can also be stated as one in 10 people who got MRIs waited more than 75 days).

What can you do?

If you're looking for a family doctor, go to the website of the College of Physicians and Surgeons of Ontario, www.cpso.on.ca and click on "Doctor Search." You may find a physician who is taking new patients in your community.

Because some patients are more severely ill, they need services faster than others. The Wait Time Strategy divides patients waiting for services into four categories based on need and has set targets for each. Priority I is the highest priority, for life-threatening situations (such as a patient who needs cancer surgery immediately because the cancer is bleeding or blocking an airway). Priority IV is less urgent (such as cancer surgery for a slow-growing tumour). The target for Priority I cancer surgery or diagnostic scans is no wait at all, while Priority IV targets are 84 days for cancer surgery and 28 days for CTs or MRIs. The targets were set by experts as the safe amount of time patients can wait without the risk of further deterioration in their health or undue anxiety and pain.

Percentage change in the adjusted rates of cancer surgery in Ontario from baseline 2002/03 to 2006/07



Note: Rates for hysterectomy and mastectomy include Ontario's female population only; rates for radical prostatectomy include Ontario's male population only; data is age- and sex-adjusted

Source: Institute for Clinical Evaluative Sciences

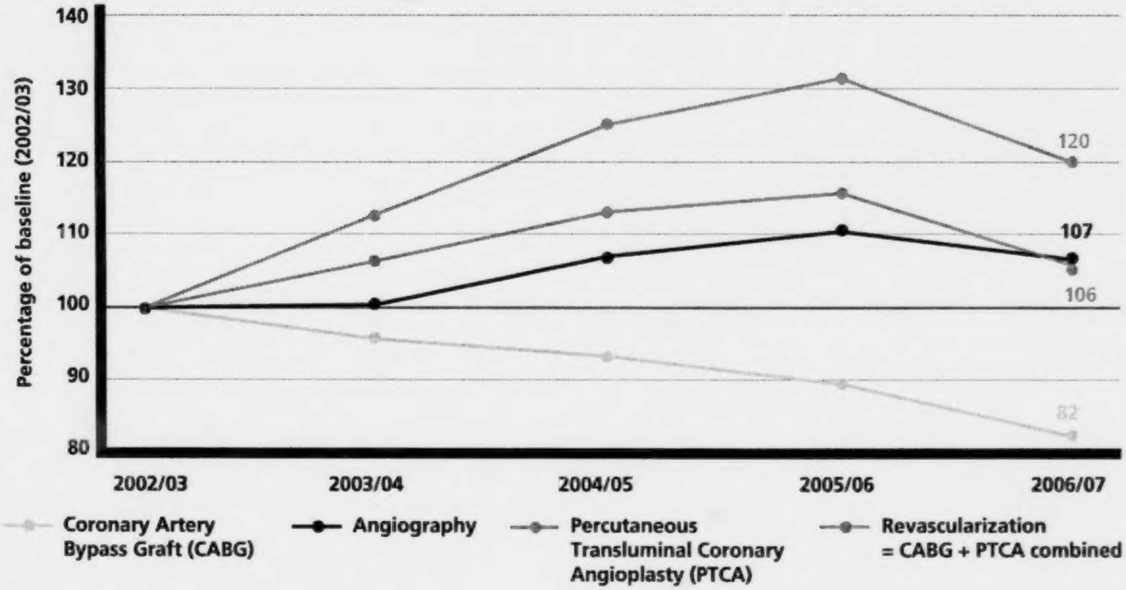
To track how many more services are being provided, we use data routinely collected by doctors and hospitals. We calculate the rate of a procedure by dividing the total number performed in a year by up-to-date population figures for Ontario (which lets us be sure we've accounted for population growth). To make it easier to follow rates over time, we use 2002/03 as the baseline year, assigning it a rate of 100, and then compare subsequent years to it. So a new rate of 110 means the rate went up 10 percent and a figure of 97 means there were three percent fewer procedures, after increased population is taken into consideration.

We used data on changes in waits from August/September 2005, when the strategy was launched, through December 2007. We could not get information that broke down waits by priority category, so we compare all waits to the targets for the lowest-priority cases — Priority IV. This would at least allow us to conclude that if wait times missed the Priority IV target, then there must be an important segment of the population whose needs are not being met. The Wait Time Strategy was to release data by priority category in April of 2008. This important information should be available on its website at **www.ontariowaittimes.ca**.

The first two graphs look at the changes in rates of cancer surgeries and cardiac procedures. Except for prostate cancer, there hasn't been much change in rates for cancer surgery. Surgery for cancer of the prostate has increased almost 20 percent since the baseline year 2002/03, which may reflect a change in practice after a study found surgery can reduce the chance of the disease returning.

The next graph examines angiography and two different "revascularization" procedures that open up blockages in the arteries that supply blood to the heart muscle. In coronary artery bypass graft (CABG) surgery, clogged arteries around the heart are replaced with arteries taken from other parts of the body. Percutaneous transluminal coronary angioplasty (PTCA) is a less invasive procedure in which a narrowed artery is widened using a tiny balloon inserted through the thigh of a sedated but conscious patient. Which one a patient gets depends on factors such as the number and location of diseased arteries, and may also be influenced by physician preferences and availability of services. Angiography is a form of X-ray done to check if blood vessels are blocked. It must be done before a revascularization can be performed; if there's a wait for it, there's a wait for treatment too.

Percentage change in the adjusted rates of cardiac surgeries in Ontario from baseline 2002/03 to 2006/07



Note: Data is age- and sex-adjusted
Source: Institute for Clinical Evaluative Sciences

The graph below shows a steady decrease in coronary artery bypass surgery, balanced by increases in PTCA. Combining them into a single count, labelled "revascularization," shows the rate of revascularization procedures is remaining about the same.

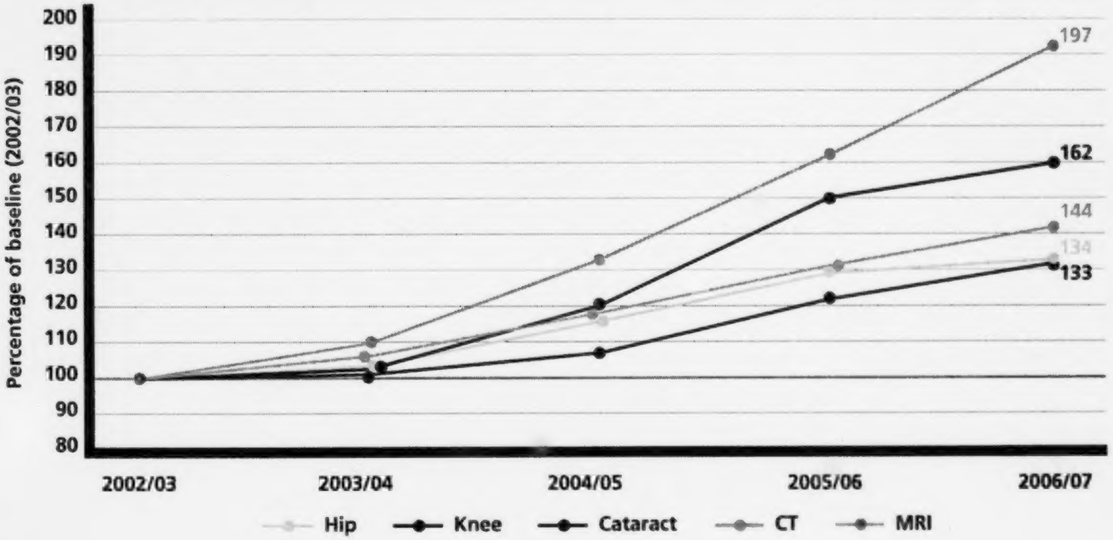
The third graph looks at changes in the rates for cataract surgery, hip and knee replacement and for CT and MRI scans. Rates for all of them increased substantially after the Wait Time Strategy was introduced.

The next three graphs show 90th percentile waits for cancer surgery and cardiac procedures. The waits for cancer surgery and coronary artery bypass surgery are well below the targets for Priority IV patients. As noted previously, we do not know if targets are being met for higher priority patients; this information will be available later this year. The graph of cardiac procedures shows waits for angioplasty and angiography have gotten much shorter, but there is no Wait Time Strategy target time for either.

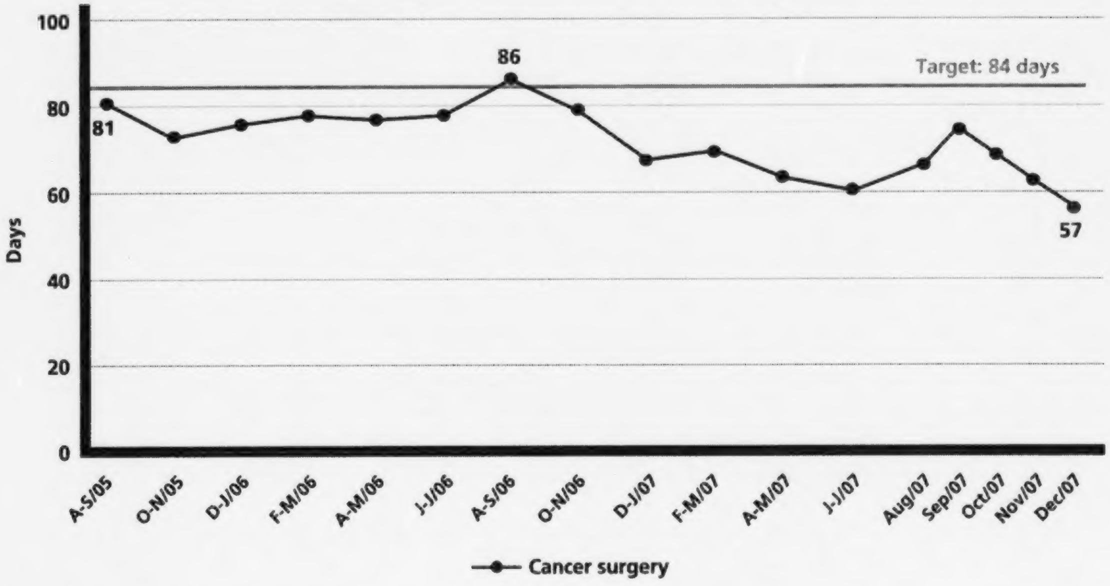
The final two graphs show 90th percentile waits for cataract surgery, joint replacement and diagnostic scans. Waits for cataract surgery are way down, and the most recent data show waits well below the Priority IV target of 182 days. Waits for joint replacements have fallen steadily since April, 2005, but remain higher than the Priority IV target of 182 days. Waits for CT scans have fallen more slowly and are still twice as long as the Priority IV target time of 28 days. The strategy has not been that effective for MRI scans. In fact, after an initial shortening of waits, they've increased steadily since early 2006. The most recent data shows waits far longer than the Priority IV target.

Ontario's Wait Time Strategy set out to increase availability of five selected types of care while setting up a system to keep track of whether that was resulting in shorter waits. The results so far are mixed. With cancer surgery, it's good to see waits overall are decreasing, but until we know more about the specific waits for people in each priority category, we can't be sure how well the strategy is working. Shorter waits for angiography and angioplasty are good news, too, but again, we need more information to assess the success of the Wait Time Strategy — in this case, we need target wait times for the procedures by priority level. Without more information, we can't judge whether patients with cancer and heart problems are getting care according to the priority of their need.

Percentage change in the adjusted rates of joint replacement, cataract surgery and diagnostic scans in Ontario from baseline 2002/03 to 2006/07

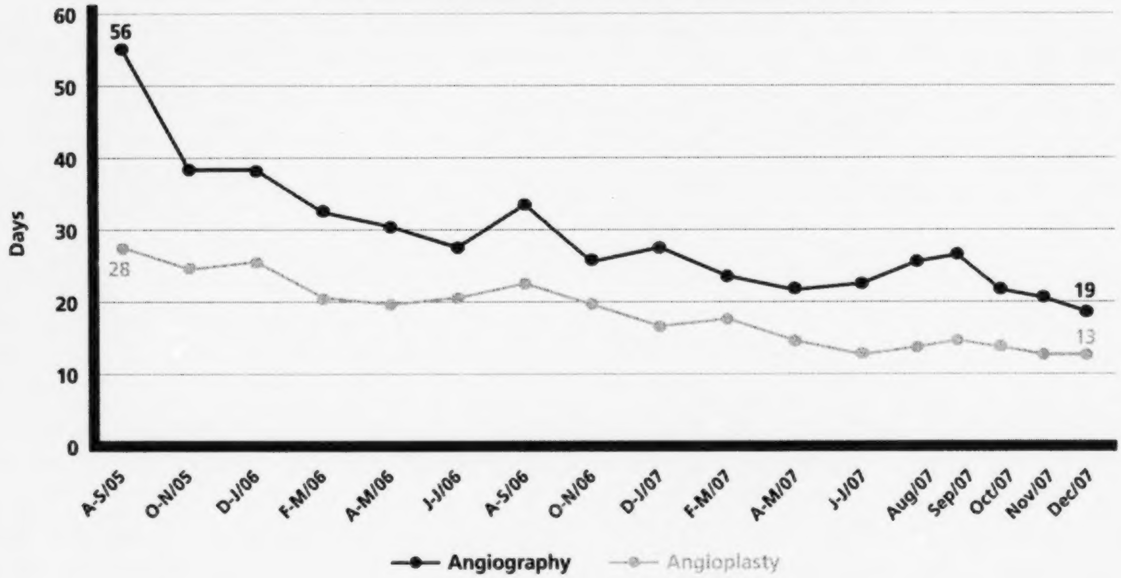


Note: Data is age- and sex-adjusted
Source: Institute for Clinical Evaluative Sciences



90th percentile wait times for cancer surgeries in Ontario, August/September, 2005 to December, 2007

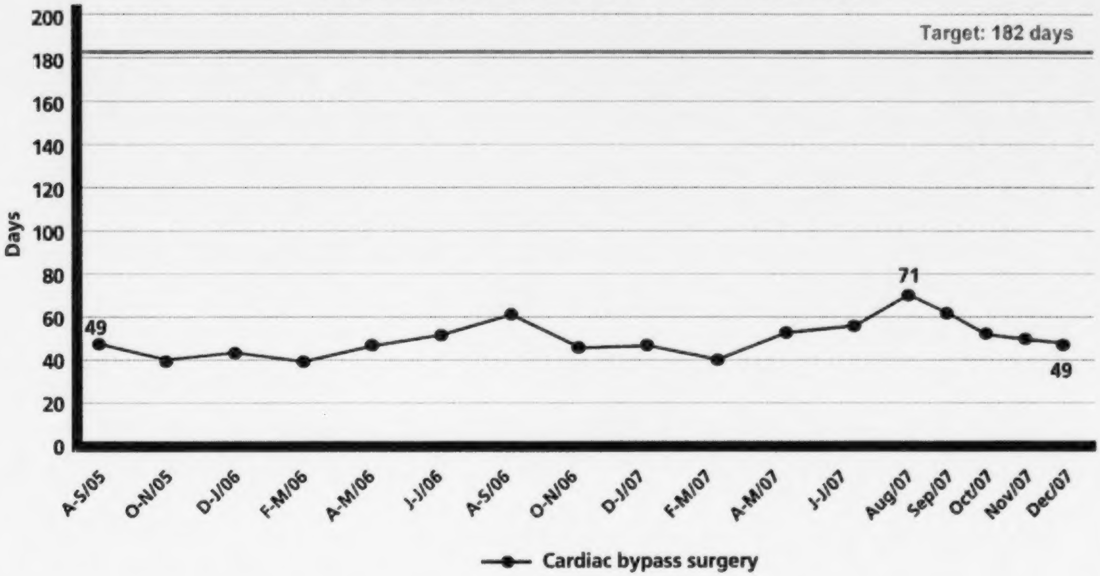
Source: Wait Times Information Office, 2008. Ministry of Health and Long-Term Care



90th percentile wait times for angiography and angioplasty in Ontario, August/September, 2005 to December, 2007

Note: The Wait Time Strategy has not set a target for these two procedures
Source: Wait Times Information Office, 2008; Ministry of Health and Long-Term Care

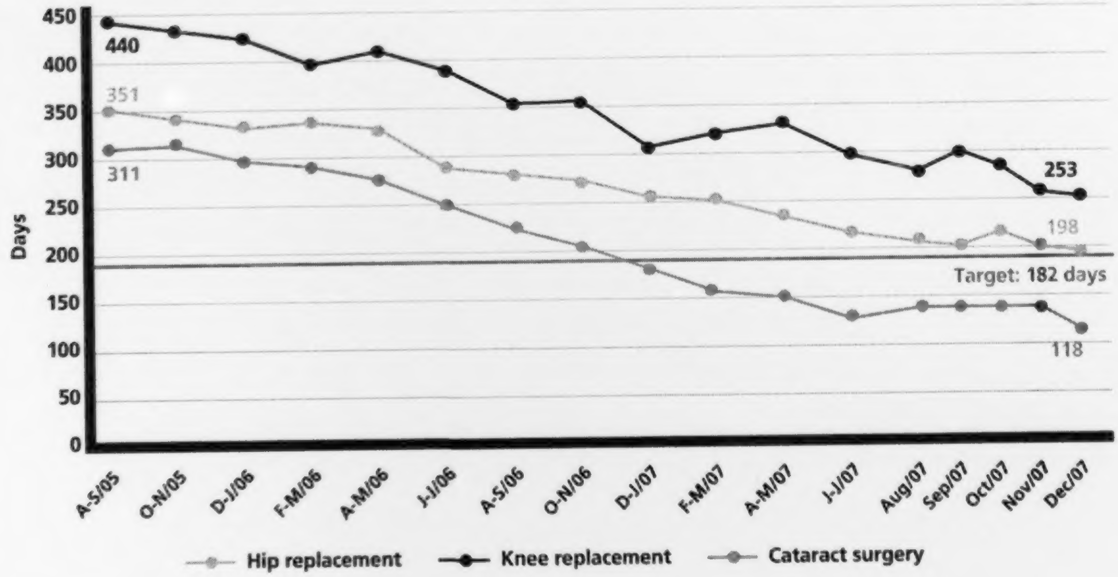
90th percentile wait time for cardiac bypass surgery in Ontario, August/September, 2005 to December, 2007



Source: Wait Times Information Office, 2008; Ministry of Health and Long-Term Care

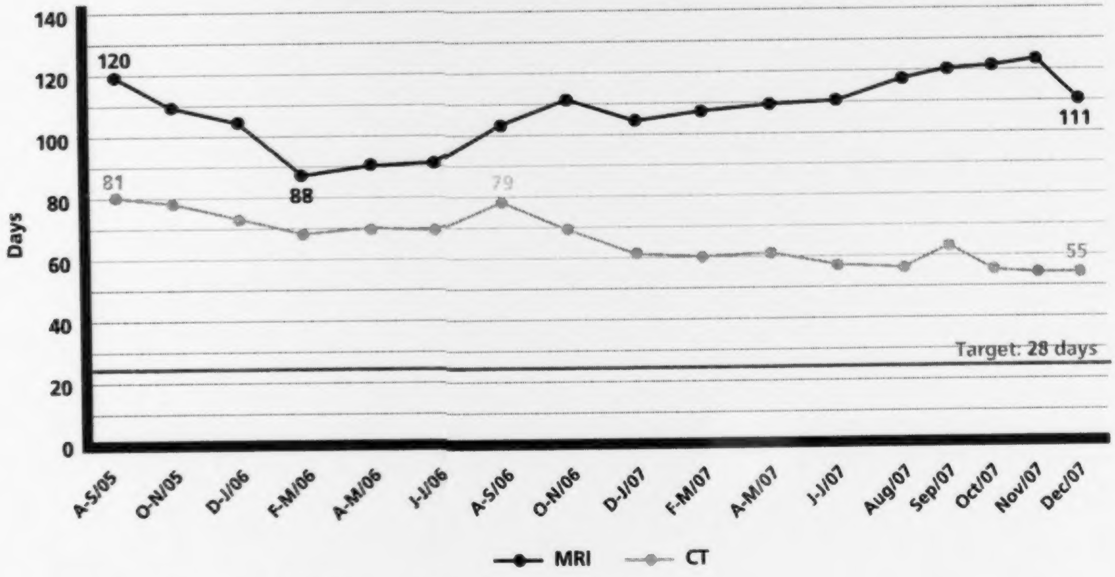
Rates for cataract surgeries, joint replacements and imaging scans have increased greatly and in most cases, that's meant a drop in wait times. However, MRIs are an exception. The failure to decrease the wait times for MRI scans raises an issue that so far, the Wait Time Strategy hasn't addressed. Although the number of MRI scans has almost doubled, waits are no shorter. Are doctors ordering MRIs when they're not really necessary? Are the benefits of an MRI going to the people who need them most? What standards are there for assigning priority to competing demand for the service? Is priority determined by patient need, or by the type of doctor who ordered it? Does a serious shortage of MRI capacity remain? From the posted wait times (www.ontariowaittimes.ca), waits are much shorter in some hospitals than others — should the supply be managed collectively, perhaps by the local health integration network, so it's not just luck whether a patient suffers for months or gets a scan quickly? These same questions are valid for all health-care procedures, and we can't truly assess the impact of the billion-dollar Wait Time Strategy until we know more about whether all the services it includes are being used appropriately — in other words, that they're offered only to those who will

90th percentile wait time for hip and knee replacement and cataract surgeries in Ontario, August/September, 2005 to December, 2007

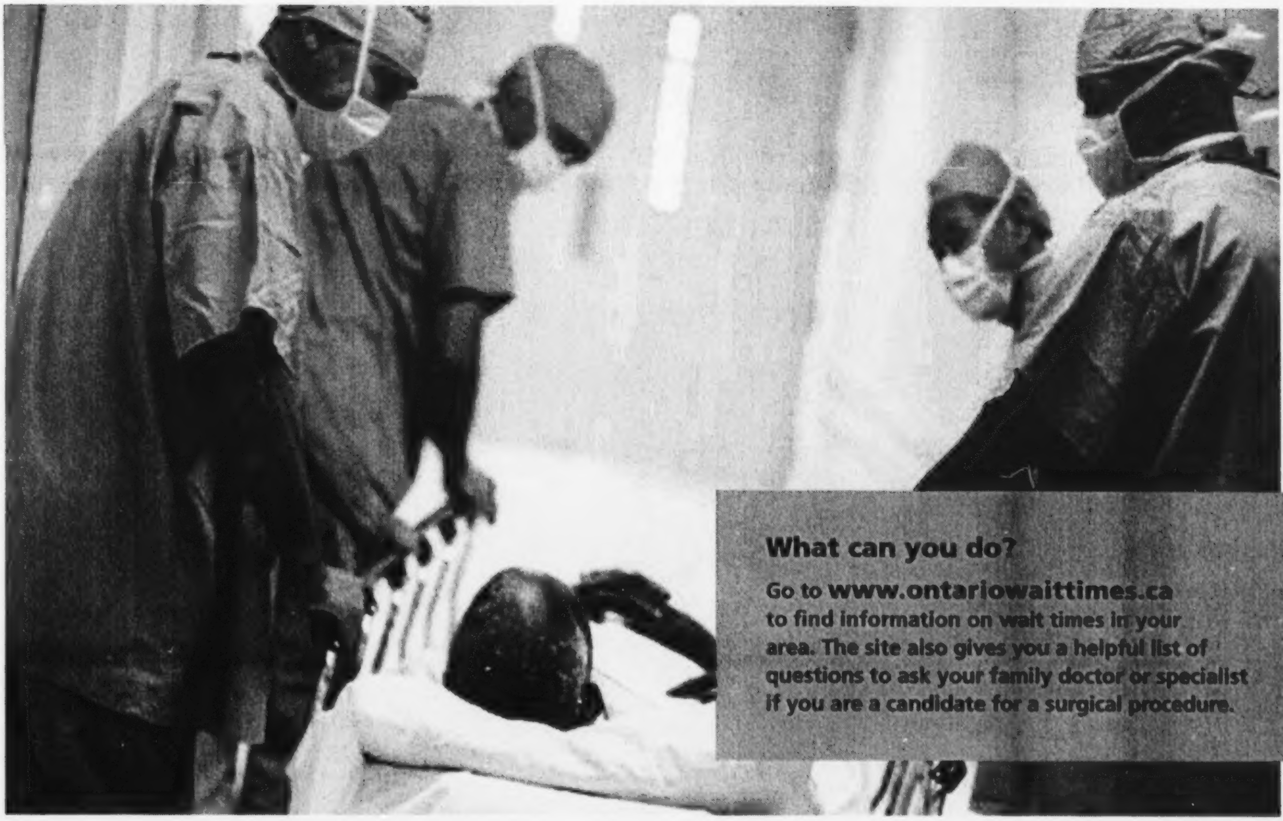


Source: Wait Times Information Office, 2008; Ministry of Health and Long-Term Care

90th percentile wait time for MRI and CT scans in Ontario, August/September, 2005 to December, 2007



Source: Wait Times Information Office, 2008; Ministry of Health and Long-Term Care



What can you do?

Go to www.ontariowaittimes.ca to find information on wait times in your area. The site also gives you a helpful list of questions to ask your family doctor or specialist if you are a candidate for a surgical procedure.

truly benefit. That doesn't always happen. One study in British Columbia, for example, found that while almost all patients who had a hip replaced benefited, some 27 percent of people who had cataract surgery had vision that was the same or worse than before the surgery.[8]

The fact there's been a huge increase in MRI rates with no impact on waits might mean there was huge unmet demand before, or it could be that physicians are ordering more tests than are really necessary, or it might be there are problems with the way hospitals manage access to MRIs. In some cases, inappropriate care is potentially dangerous. CT scans, for example, can be very useful but they involve substantial radiation. For some patients, the risk from the scan may outweigh the potential benefit.

In the November 2007 Speech from the Throne, the government said it would expand its work on waits to include visits to emergency, children's surgery and general surgery. The Wait Time Strategy is also expanding its information gathering to capture all orthopaedic, eye, and general surgery procedures by summer 2008. By summer 2009, it will report on all paediatric and adult subspecialty surgeries. These will be important additions to our understanding of health-care delivery in Ontario, and we look forward to the public release of this information.

2.1.4 Access to emergency department care

Emergency departments are a key part of the Ontario health-care system, treating both serious, life-threatening conditions as well as minor, acute illnesses. Each year there are about five million emergency department visits in Ontario. Most of us have first-hand experience with them. Emergency departments can be an early warning sign for health care because they can feel the effects of problems which arise in other parts of the system. If patients can't access a family doctor, they may end up in the emergency department, even for routine, non-urgent care. If patients can't be discharged from hospital to a long-term care facility because there are no beds, then the hospital may not have any empty beds. As a result, patients who need beds may have to stay in emergency, sometimes on a stretcher in a hallway.

We used two measures of timeliness to assess access to emergency care. The first was to count the time from when patients arrive in emergency until they're sent home or transferred to another place for care. Hospitals routinely collect that information and the Ontario government has targets for it, depending on the priority level assigned to a patient. For the sickest patients who need the most care (level I or II), the visit should be completed within eight hours; for Priority III, who need less care, the target is six hours; and Priority IV or V patients, who are the least urgently ill and don't need complicated care, should be on their way in four hours.

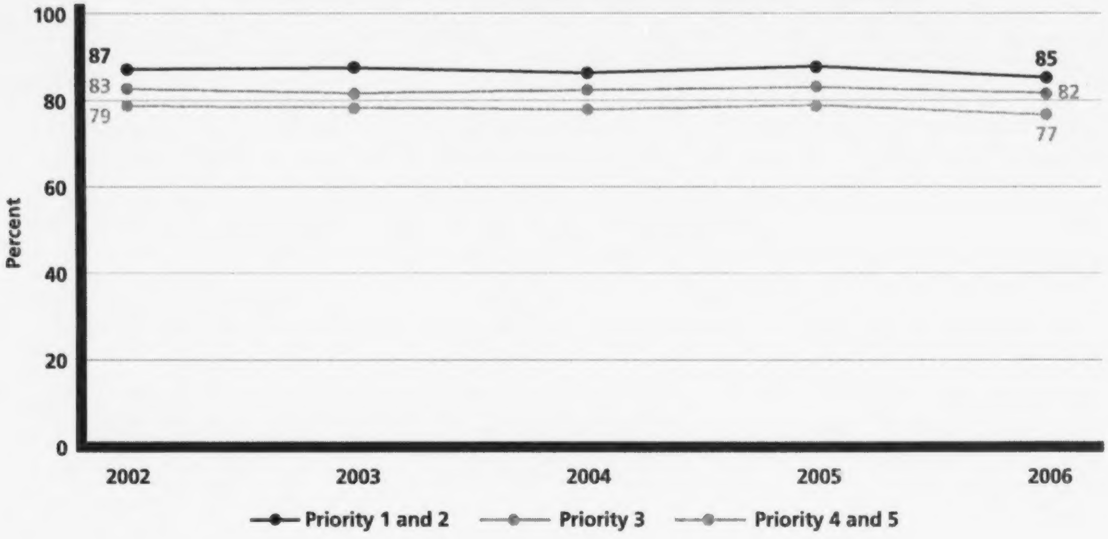
The graph below shows that approximately one-sixth of patients stay in emergency longer than the target amount of time, a figure that hasn't changed much over the past five years. It often makes sense to observe the sickest patients for extended periods before deciding to admit them or to send them home, so there may be some exceptional cases where a wait beyond eight hours is reasonable. In many cases, however, decisions about treatment have been made and the patients are occupying needed space in emergency while they wait for a hospital bed.

A second method for measuring waits in emergency looks at the time from when patients arrive in emergency until they're treated. Data for this measure come from the Commonwealth Fund survey, which allows for international comparisons. This survey shows that Ontarians, like other Canadians, are far more likely to say they waited more than two hours for treatment in emergency than people surveyed in other countries. Almost half the people surveyed in Ontario waited more than two hours, far more than the United States or United Kingdom and almost five times as many as in Germany or the Netherlands.

Reaching even the middle of international averages for emergency waits would be a formidable challenge. New Zealand's waits are about in the middle of the countries surveyed. If we want to ensure the proportion of Ontarians who wait more than two hours is no larger than New Zealand's, we would need to handle about a million more visits a year in less than two hours.

There's lots of work going into improving the situation in Ontario's emergency departments. In the fall of 2007, the provincial government announced that emergency waits would be added to the Wait Time Strategy and development of the Emergency Department Reporting System

Percentage of emergency patients whose care was completed within the recommended timeframe, 2002 to 2006



Note: Priority I and II: target eight hours; Priority III: target six hours; Priority IV and V: target four hours
Source: Institute for Clinical Evaluative Sciences

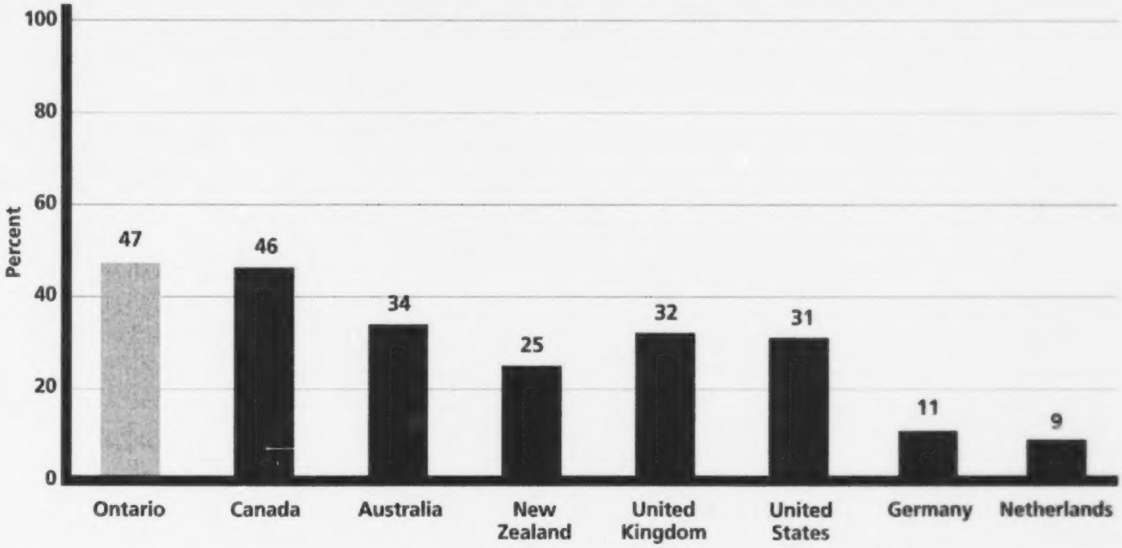
The importance of Flo

Leaving hospital is not just a matter of walking out the door for the elderly. While many (though sadly not all) young and middle-aged people return to their homes and jobs when they leave hospital, the health crises of the elderly often mean a loss of independence. Even people well enough to return home may no longer be able to drive, or strong enough to run a household without help. Others can't go home, and need a place in a long-term care centre. Many wind up in hospital much longer than they need to, waiting for a place in a long-term care home, or for homecare support to be organized.

The Flo Collaborative was designed to improve the transition process from hospital to the community. It's named for an imaginary — but typical — 85-year-old patient, "Flo," ready to leave hospital after an acute problem. Launched in September 2007, its goal is to make transitions from acute-care hospitals to other settings "faster, with fewer hassles, bottlenecks and irritations to everyone, including Flo, her family and the staff who care for her." One observation so far is that planning for discharge tends to begin only when patients no longer require acute care, rather than starting within two or three days of admission to reduce delays.

Like all good quality-improvement projects, data are being collected to track progress in achieving improvement. The collaborative is also working with senior leaders to help them support improvement efforts and is training improvement advisors to provide them with the necessary quality improvement knowledge to achieve success. There are 29 improvement teams, and a total of 42 organizations, such as hospitals and Community Care Access Centres, involved in the project to make transitions between different types of care better for everyone.

Percentage of the population who visited emergency and say they waited two hours or more for treatment after arrival, 2007



Note: Country-level data is weighted to reflect demographic composition of the country from the latest census; Ontario-level data is not weighted

Source: Health Council of Canada, 2007; Commonwealth Fund 2007 International Health Policy Survey of the General Public's Views of their Health Care System's Performance in Seven Countries

Tens of thousands of small steps toward change

The emergency department at the University Health Network's Toronto Western Hospital site is certainly one of the busiest in the province, if not the country. Plenty of hustle and bustle is probably inevitable. But as part of an initiative to reduce waits in emergency, staff at the hospital began to wonder if there wasn't just too much running around going on.

They worked out that about five hours a day was being spent searching for equipment. The statistics they gathered are remarkable: With an average of 90 patients a day, each getting two visits from registered nurses and physicians, there was a minimum of 180 staff visits to patients a day. The nurses and doctors were spending 334 minutes (5.6 hours) every day in what they called "out-of-the-room time" — time away from the bedside, spent looking for supplies. Time that could otherwise be spent on direct patient care. And in the course of their searching, they walked 29,880 feet, 5.7 miles.

If you've ever struggled to cook a meal in someone else's kitchen, where you have to look five places every time you need a spoon or spice, you'll understand the problem at University Health Network. There was no method to storage. Something that was kept with one set of material in one closet might be with something else in another. It was a huge waste of time.

The overall goal of the project was to create an organized, clean and safe workplace for efficient patient care. To reduce the time wasted chasing supplies, they standardized work spaces, supply areas and equipment practices in key areas of the department, in a re-organization blitz that took 4.5 days. It was a new use for an old idea — a place for everything and everything in its place. And it worked. The team reduced time wasted searching for supplies and equipment by over 44 percent, freed up 111 square feet of space in their department and improved staff satisfaction by 14 percent.

started immediately. Six hospitals around the province are pilot sites for the system. What to measure — which could include how long it takes to get assessed and admitted, how long people spend in emergency and the total number of patients — is being discussed as this is written.

Including emergency department waits in the Wait Time Strategy is a welcome addition, since delays in this important part of a hospital can have serious impact on patients, workers and the system as a whole. We look forward to getting better information about flow through emergency; it's needed for pinpointing problems and implementing solutions. We would also like to see better data on waits, overcrowding and the proportion of people who leave emergency before they are seen.

2.1.5 Access through communication technology

Ontarians are changing the way they communicate. High-tech breakthroughs make it possible to chat with people by phone or e-mail or text message almost anytime. It makes sense for the health system to use creative and innovative communication technology to make it easier for people to get the care and advice they need. Technology has the potential to deliver care to people in remote areas or who cannot travel, in ways that are faster, more convenient, and potentially less expensive than face-to-face encounters.

That's certainly the case with the Ontario Telemedicine Network, which is growing every year. The network uses teleconferencing technology to allow specialists based in central sites to get involved in cases with providers and patients hundreds of kilometres away.

What can you do?

Don't go to emergency departments unless you have to — call Telehealth Ontario (its toll free number is 1-866-797-0000) if you are not sure or go to your own doctor if they have after-hours services.

If you have to go to the emergency department, bring your medication and key information about your health with you.

The Telehealth system allows people to contact nurses by telephone anytime they need advice or help. Telehealth gives people in Ontario a first place to go for advice on health problems.

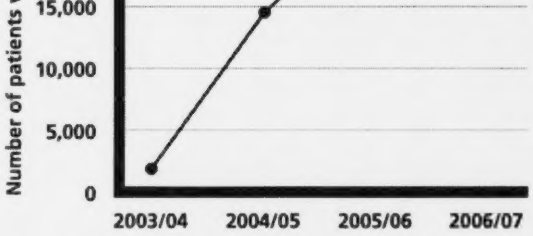
We used two sources of data to look at how Ontario residents use communication technology to access care. The Ontario Telemedicine Network gave us information on the use of their teleconferencing services. The Commonwealth Fund survey asked questions about the use of e-mail and telephones as sources of health information and advice.

The telemedicine network has doubled its number of members around Ontario from 119 to 234 since 2003/04, and has rapidly increased the number of patient visits for clinical consultation, as this chart shows.

Using e-mail to communicate with your doctor is not very common in any of the countries surveyed, however, Ontarians (and Canadians) are the least likely to use it as a way to contact their physician.

A U.S. research study found patients like to use e-mail for minor or routine messages, from asking for prescription renewals or describing a minor ailment, to scheduling[9]

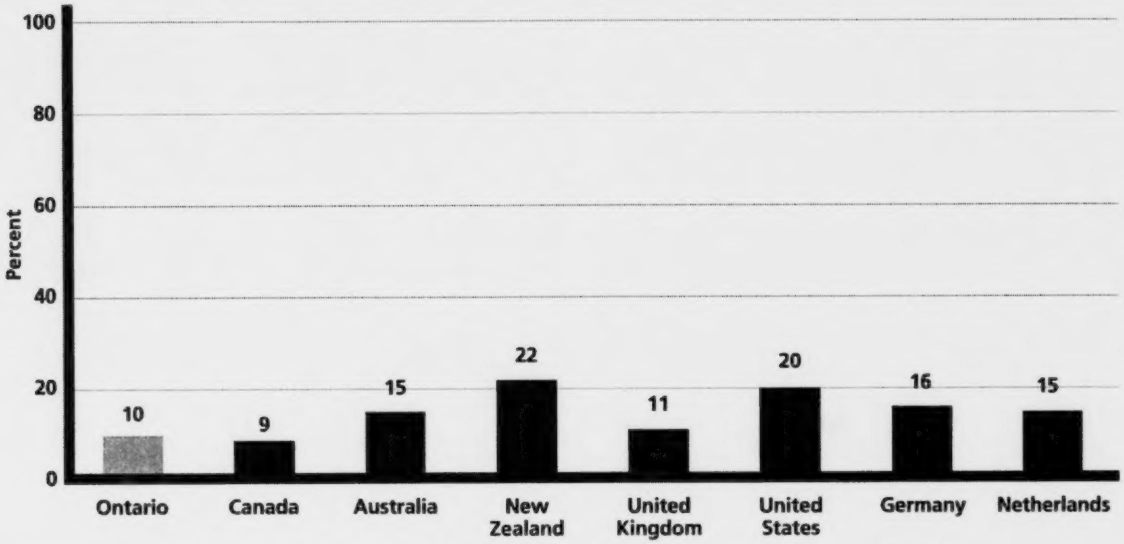
Use of telemedicine for patient consultations across Ontario, 2003/04 to 2006/07



Note: Patient consultations deal with clinical questions only

Source: Ontario Telemedicine Network, 2007; Ministry of Health and Long-Term Care

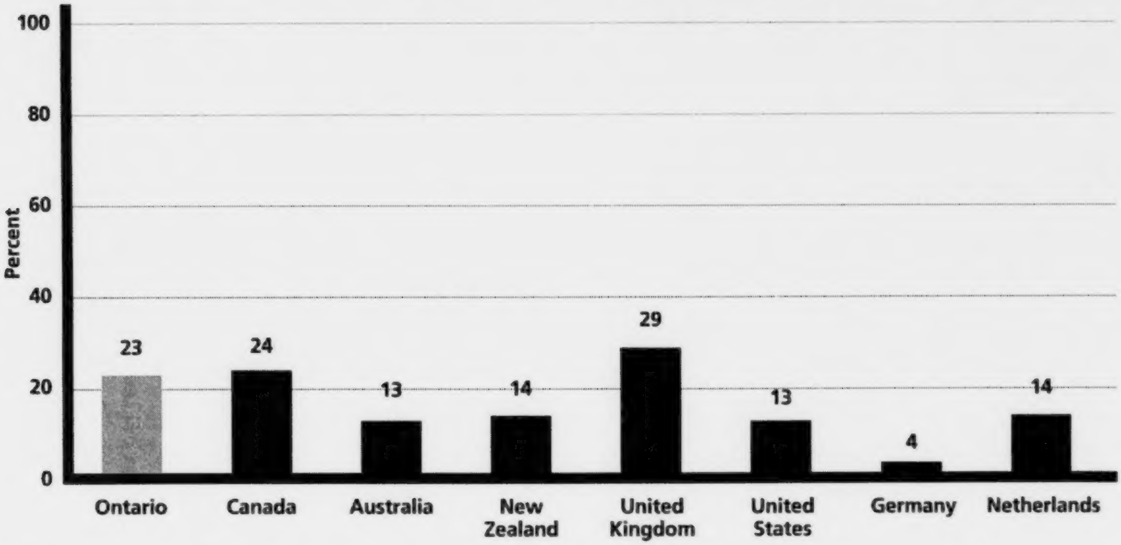
Percentage of adults who have a regular doctor or place of care who can communicate with this health-care provider by e-mail, in Ontario and by country, 2007



Note: Country-level data is weighted to reflect demographic composition of the country from the latest census: Ontario-level data is not weighted

Source: Health Council of Canada, 2007; Commonwealth Fund 2007 International Health Policy Survey of the General Public's Views of their Health Care System's Performance in Seven Countries

Percentage of adults who called a telephone help line for medical or health advice in the past 12 months, in Ontario and by country, 2007



Note: Country-level data is weighted to reflect demographic composition of the country from the latest census; Ontario-level data is not weighted

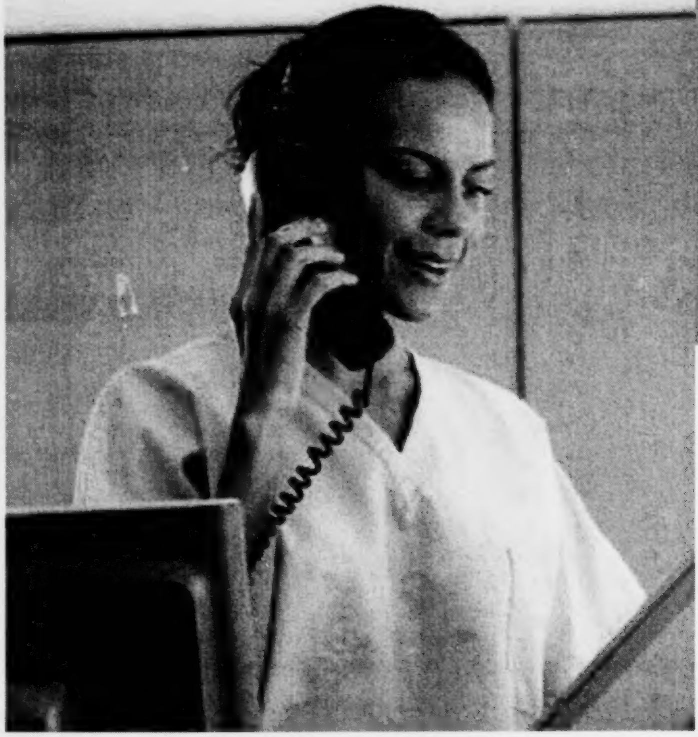
Source: Health Council of Canada, 2007; Commonwealth Fund 2007 International Health Policy Survey of the General Public's Views of their Health Care System's Performance in Seven Countries

Understanding and help from eighty kilometres away

Telemedicine is making things easier for people with psychiatric problems in one Ontario town — and for the people who work in the local emergency department at the same time. Leamington District Memorial Hospital serves a town of 30,000 on the shore of Lake Erie. There was concern that people coming to the emergency department with mental-health problems were not optimally cared for. Lacking psychiatric expertise on site, emergency doctors often found themselves issuing a Form 1, which allows the hospital to hold a patient involuntarily for up to 72 hours, until a proper mental health assessment could be done. That meant patients who didn't really need to be admitted, let alone kept in against their will, faced what could be long waits for care.

Just over two years ago, the Leamington District Memorial Hospital entered an agreement with the Chatham-Kent Health Alliance (a group of hospitals in and around Chatham, 80 kilometres away) to use telemedicine technology to provide mental health crisis interventions. Now, when someone in crisis comes to Leamington's emergency department, staff contact a mental health crisis nurse in Chatham, who assesses the patient long distance, using videoconferencing technology and recommends appropriate care. Many patients are discharged with referrals for community resources or a follow-up appointment; those that need inpatient psychiatric care are sent directly to Chatham.

The long-distance care is working well. Doctors in emergency feel better handling mental health crises with back up from the psychiatric experts in Chatham, and patients benefit from a prompt response and quick start to treatment when they need it most.



What can you do?

Keep the Telehealth Ontario phone number handy — 1-866-797-0000.

If you need to travel for a medical consultation, ask your doctor about the possibility of having your appointment through the Ontario Telemedicine Network. Go to www.otn.ca to learn more about how it works.

Ask your doctor when you can start making appointments and getting information by e-mail.

or asking about something embarrassing, such as impotence.[10] Where they use it, physicians like e-mail for scheduling and find it useful for chronically ill patients; they can quickly and easily recommend small changes in care and monitor and support patient's efforts to manage their illness themselves.[11] Another U.S. study found doctors are worried, though, about the time it takes to e-mail patients, which usually isn't recompensed, paying for extra security technology and the legal implications of using e-mail.[12]

On the other hand, Ontarians are second only to people in the United Kingdom when it comes to rates of use of telephone advice.

The Ontario Telemedicine Network has made it possible for many Ontarians to get services without having to travel long distances to meet health-care providers. Telehealth Ontario's popularity shows people are anxious to make the right decisions about when and where to seek care. These are important steps in improving access to care. But we're slow to adopt other important technological breakthroughs that are improving care in other countries around the world. Our successes with telemedicine and telehealth should set the stage for looking at other ways to use communication technology to improve access to care.

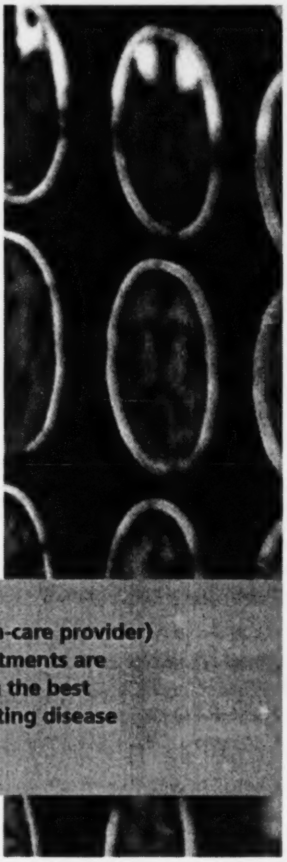
2.2 Effective

2.2.1 Overview

A high-performing health-care system should prevent illness, reduce pain and suffering and, when possible, make sick people better and increase life expectancy. When it accomplishes those things by making sure patients get treatments that are known to work, promptly and in the right order, and by tailoring treatment to the patient's individual needs, we consider it to be effective health care. Unfortunately, those factors don't always come together, and patients don't always get the results we hope for.

For this report, we examine "outcomes": did the patient's health or quality of life improve? Did we prevent death or disability? In general, we focus on those outcomes where we know we can improve them, through the good care we deliver. The measures we look at are:

- Death rates for hospital care of heart attacks and strokes
- Return visits to emergency by children already treated for asthma attacks
- Death rates of patients discharged after treatment for heart attacks or heart failure
- Adverse outcomes for patients newly diagnosed with diabetes conditions



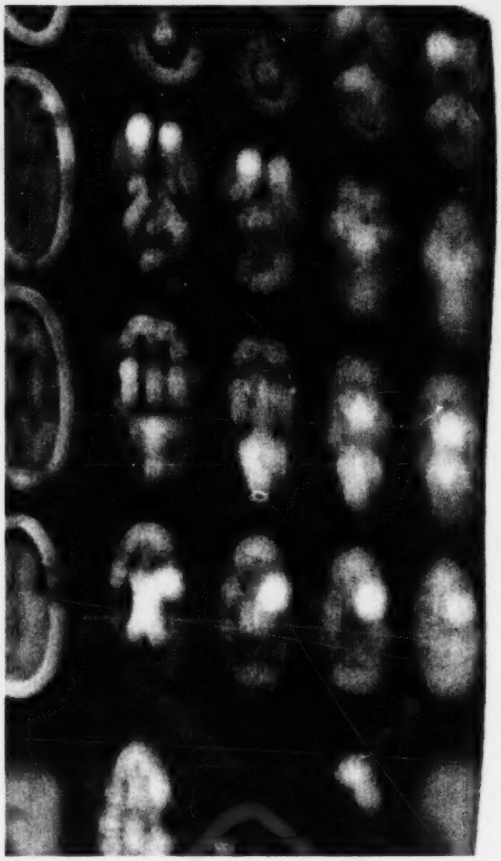
People should receive care that works and is based on the best available evidence.

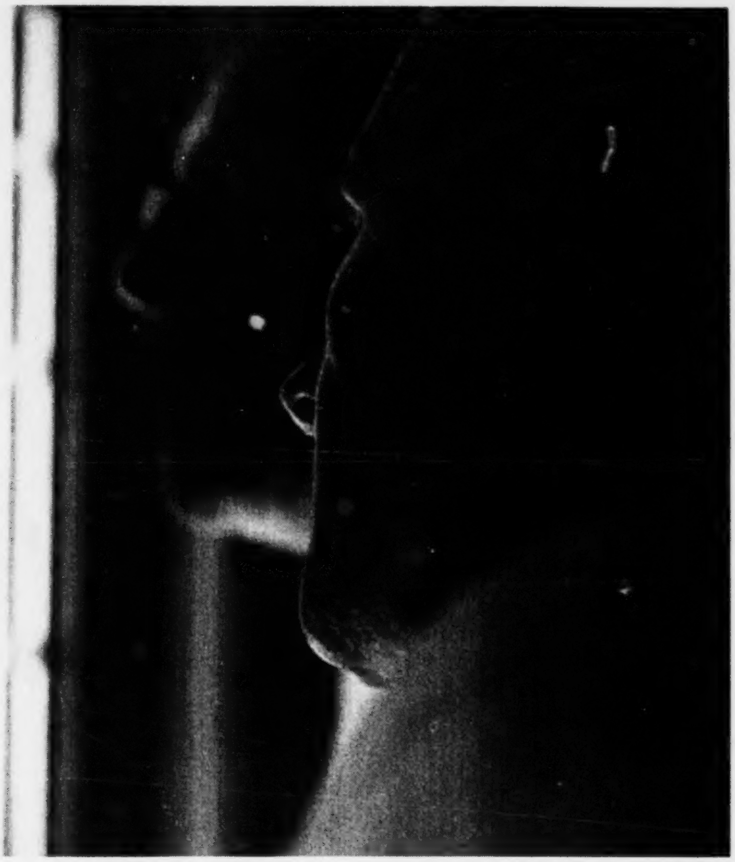
For example, your doctor (or health-care provider) should know what the proven treatments are for your particular needs, including the best ways of co-ordinating care, preventing disease and using technology.

2.2.2 Outcomes of hospital care for heart attack and stroke

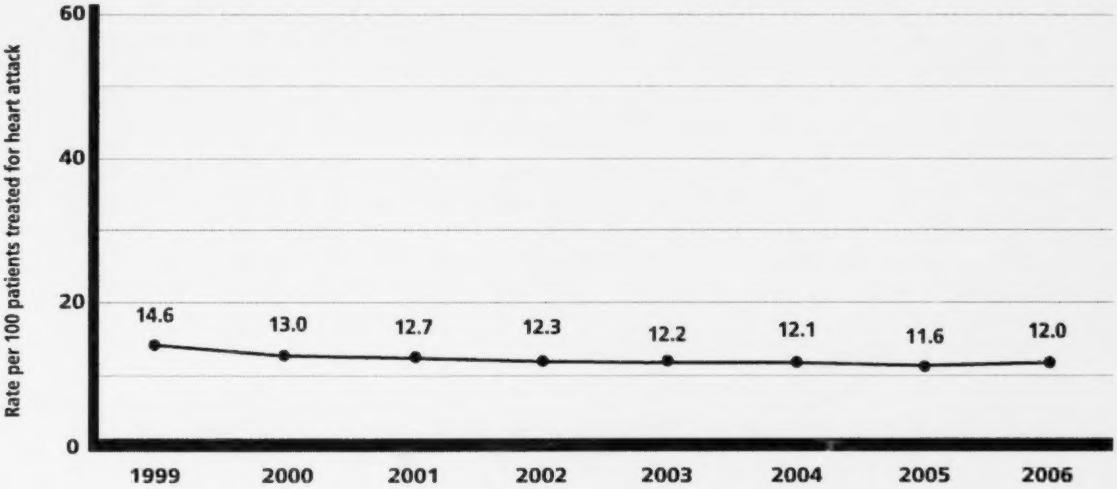
Heart attacks and strokes are major causes of death in Ontario. Recent improvements in care mean people who receive the right care fast enough have a better chance of surviving. That's partly because of drug developments and partly because we've learned more about how important it is to deliver those drugs within a certain timeframe. The Ontario Stroke Strategy and individual hospitals are focusing on getting patients treated promptly. By measuring how many people are still alive 30 days after their heart attack or stroke, we can tell if these efforts are working. Comparing Ontario results to other provinces is one way to check if we could be doing better still.

We used data collected from hospitals for Ontarians who had either heart attacks or strokes to see if they died in the next thirty days, whether they were still in hospital or had been released. It showed a steady decrease in deaths within 30 days, from about 15 percent of people admitted with heart attacks and strokes in 1999 to about 12 percent in 2006.



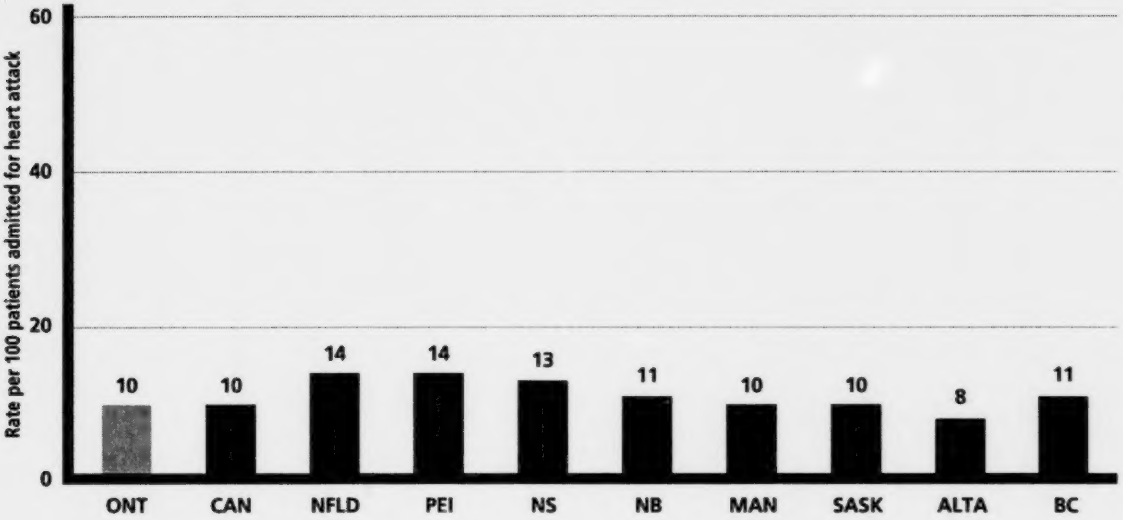


Adjusted death rate from heart attack within 30 days per 100 patients in Ontario, 1999 to 2006



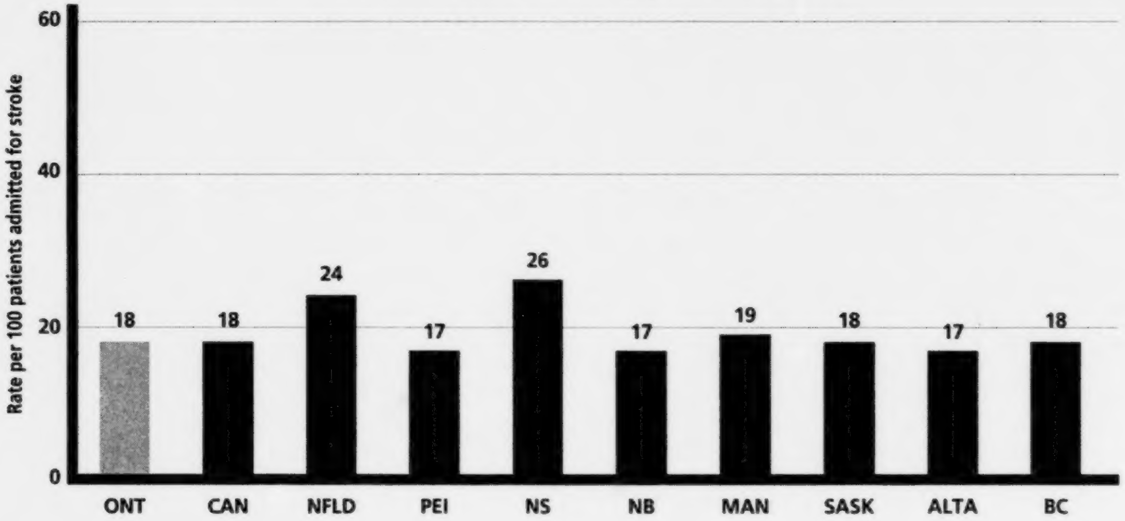
Note: Data is age- and sex- adjusted.
Source: Institute for Clinical Evaluative Sciences

Adjusted in-hospital rate of death within 30 days per 100 patients admitted for heart attack, by province, 2004



Note: Data is risk-adjusted
Source: 2007 Health Indicators; Canadian Institute for Health Information

Adjusted in-hospital rate of death within 30 days per 100 patients admitted for stroke by province, 2004



Note: Data is risk-adjusted
Source: 2007 Health Indicators; Canadian Institute for Health Information

Since 2004, we have been able to compare the number of deaths across Canada that occur in hospital within 30 days of hospital admission for heart attack and stroke. The most recent data shows Ontario has in-hospital death rates very similar to the overall Canadian rates.

It's encouraging to see a steady decrease in the rate of deaths within 30 days of a heart attack. What we don't know is how low these could go as our knowledge about what works builds and we introduce new programs to make sure patients get the best care, but we should expect continued improvement. The national data show in-hospital death rates after heart attacks for people in Ontario are just about average. Manitoba, Saskatchewan and Alberta are lower.

The hard part of interpreting data on outcomes is that we don't know what differences there may be in the treatments people get in different hospitals. For example, it would be useful to know which patients get "clot-busting" drugs and how fast they get them after they get to hospital. Getting clot busters and getting them fast is important, because the sooner they're given, the better they work.

A well-planned path to saving lives — the Safer Healthcare Now! campaign and heart attacks

Good health care doesn't happen by luck or by memory — it is the result of systems built to support it and people trained to deliver it. The purpose of the Safer Healthcare Now! campaign is to make health-care safer and more effective by encouraging changes in how hospitals handle six common health problems, including infections after surgery, pneumonia caused by ventilator machines and bad reactions from medication errors.

One part of the campaign is to prevent deaths among its acute myocardial infarction (or AMI — better known as heart attack) patients. "Getting Started Kits" can be downloaded from the web; they give seven components for good heart-attack care, and how to do them.

Most are about giving people the right drugs at the right time, such as aspirin and clot-busters promptly when they come in with a heart attack. Others are long-term daily medications to be given when patients are discharged: aspirin (again), beta blockers (which slow the heart down) and statins (which reduce cholesterol). Counselling to stop smoking is another important step.

For the campaign to be effective, hospitals must gather information on the care being given, including use of medications, how long it takes a patient to be treated for a heart attack after they arrive (ideally, this "door-to-needle" time should be less than 30 minutes) and whether patients are offered advice on quitting smoking. Tracking these measures helps to set target levels for care and will tell the hospital if it's making progress and which areas still need work.

One example is the Alexandra Marine and General Hospital in Goderich. Since adopting this plan in the fall of 2005, changes included developing special checklists for doctors to follow while handling a heart attack and getting ready-made "quit smoking kits" from the public health unit have improved care. As a result, almost 100 percent of drug recommendations are now followed. They're aiming for 100 on counselling heart attack patients to stop smoking, and have managed to get from almost zero to a consistent 33 to 50 percent of patients so far.

The Safer Health Care Now! campaign gets a lot more support in western Canada than it does here. Manitoba, Saskatchewan, Alberta, B.C. and the territories are one division for the campaign's work. Their population is a bit smaller than Ontario's, but the $550,000 in funding from the western provinces (made up of local, provincial, Canadian Patient Safety Institute and in-kind contributions) is more than double Ontario's $211,000 per year.

What can you do?

Ask your hospital if it's part of the Safer Healthcare Now! campaign.
Learn more about the campaign at www.saferhealthcarenow.ca.

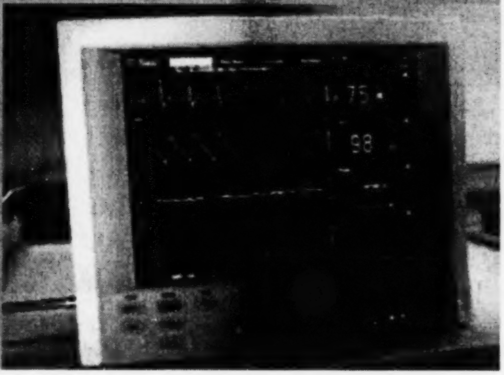
Learn the symptoms of heart attack and stroke and if you experience them, head to emergency as fast as you can. Heart attacks can be sudden and intense, but many start more slowly, with these symptoms:

- **Pain or discomfort in your chest that does not go away with rest**
- **Discomfort or pain in either or both arms, your back, neck, jaw or stomach**
- **Pain that may feel like burning, squeezing, heaviness, tightness or pressure**
- **Shortness of breath**
- **Nausea, cold sweat, lightheadedness**

Stroke symptoms come on suddenly and include:

- **Numbness or weakness in face or an arm or leg, usually just one side**
- **Confusion and trouble speaking or understanding**
- **Blurry vision in one or both eyes**
- **Dizziness, difficulty walking and loss of balance or co-ordination**
- **Severe headache with no known cause**

Visit the Heart and Stroke Foundation website for more information:
www.heartandstroke.ca.



2.2.3 Return visits to the emergency department for children treated for asthma

Childhood asthma is a growing problem in Ontario. Often, the asthma attacks are so severe people seek care in emergency departments. On average, about 100 children each day are treated in Ontario emergency departments for asthma. Appropriate care in emergency includes promptly giving drugs to relieve symptoms. Once the acute attack is controlled, parents can learn how to provide care at home to prevent new attacks. However, if a child returns to emergency with severe asthma within three days of that initial visit, it can be a sign the initial care was inadequate. Research tells us using standard checklists and other tools to ensure proper care for asthmatic kids reduces the rate of return visits to emergency.

We have not made much headway in reducing bounce-back of children to the emergency for more treatment of their asthma. In recent years between two and four percent of children treated in emergency for asthma have been back within 72 hours, and the rate has not decreased over time.

Returning within 72 hours may mean the initial asthma attack was not controlled adequately, or the patient and family couldn't prevent a new attack from developing. In either case, the emergency department might have been able to do a better job, either with better drug therapy for the first attack or by giving the parents an adequate plan to prevent further attacks. There are good treatments and good educational packages that can minimize recurrent attacks.

A recent study showed most Ontario emergency departments have strategies for dealing with asthma, but some strategies are better than others. We need to build on that research and make sure children with asthma get the best possible care in emergency departments. It is not clear how many bounce-back visits are preventable but it is clear that some emergency departments do a better job than others.

2.2.4 Outcomes of care for people with chronic conditions

Last year we looked at the difficulty Ontario is having providing high-quality primary care for people with chronic conditions, and we look at that again in chapter three of this year's report. But it is important to discuss care for chronic disease in this section on the

Helping children with asthma breathe a little easier

A study by the Institute for Clinical Evaluative Sciences found two strategies to reduce the number of children who bounce-back to emergency departments after they've been treated. The first is to use a standard "order set," a kind of checklist of everything that should be done to treat children with asthma attacks. The second factor is being able to consult a pediatrician.[13]

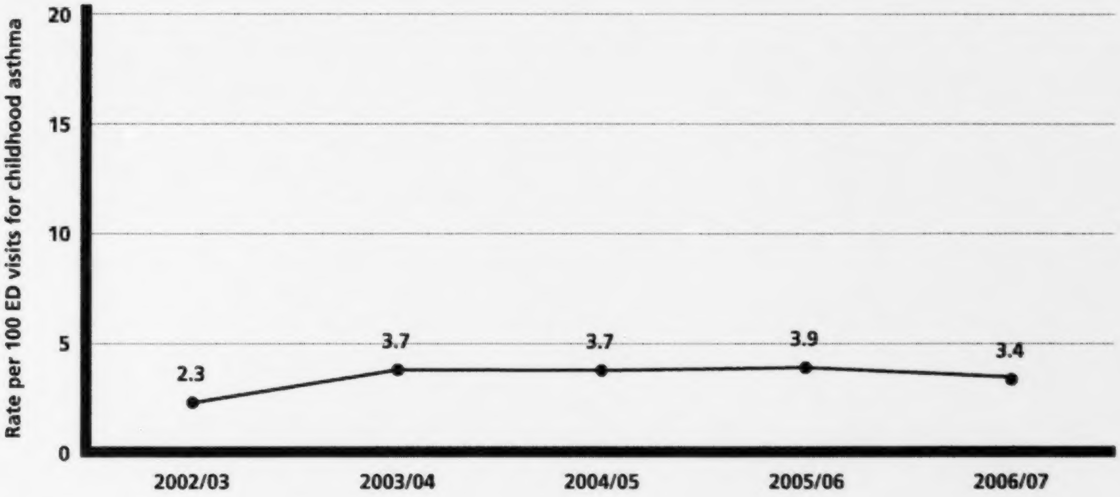
Not every hospital has a pediatrician on call, but telemedicine might help here, as it helps with mental illness in Leamington. Researchers found, however, that despite the fact using order sets is as effective as calling a pediatrician, it is the least frequently used strategy for reducing return visits for asthma.[14]

That could change through an initiative called "Open Source Order Sets," which are being prepared by physicians for an array of medical conditions. The goal of these is to streamline care, improve quality and reduce medical errors by standardizing checklists of best practices. So far 55 hospitals in Ontario, New Brunswick and British Columbia have signed on to the order-set initiative.[15]

What can you do?

Education on treating and preventing asthma attacks is important for the whole family. Visit the Ontario Lung Association — **www.on.lung.ca** — and click on "Asthma" under "Lung health" for more information.

Adjusted rate of re-admission to emergency within 72 hours of initial treatment for asthma in children, 2002/03 to 2006/07



Note: Data is age- and sex-adjusted
Source: Institute for Clinical Evaluative Sciences

effectiveness of our health-care system. Most care for chronic disease is done by primary-care physicians and the more effective it is, the more likely we are to reduce the acute complications of diabetes and death from heart attacks or congestive heart failure.

To see how Ontario is doing treating people with diabetes, we looked at complications that will put them in hospital if they're not adequately handled, including high or low blood sugar and infections related to diabetes. Good care can reduce the rate of visits for these problems.

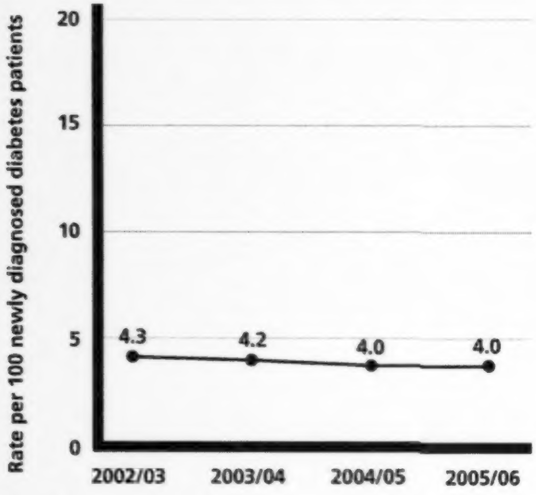
To assess how effective community care is for heart patients, we looked at the survival of patients treated for a heart attack or heart failure — but this time to see how many people who've had heart attacks die between 30 and 365 days after the attack. That longer-term survival reflects care people get in the community, rather than how well the case was handled in the hospital.

In all the measures we looked at, little has changed over the last four to five years. Our analysis shows that consistently about four percent of newly diagnosed diabetes patients end up in an emergency department or hospital for acute complications of their condition. The data on patients newly diagnosed with congestive heart failure shows that about one in six will die within a year. The death rate for patients following heart attacks remains about one in seven.

There are things that can be done in primary care to prevent complications from diabetes. The lack of change in the rate of complications over four years suggests little progress has been made in ensuring diabetics get the right care.

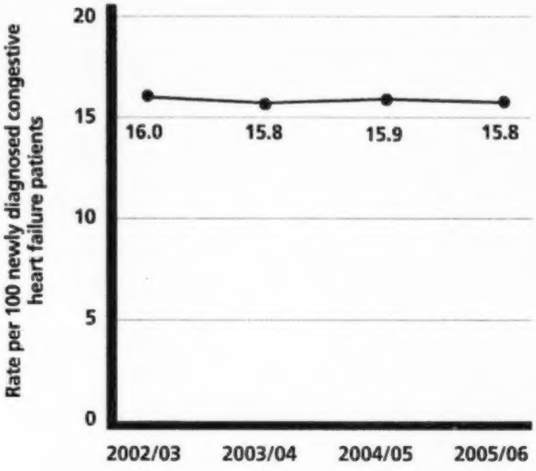
The data show death rates are very high in the first year after people have survived their initial hospitalization for heart attacks or congestive heart failure, higher even than for many forms of cancer. Despite the fact we have made substantial progress in reducing deaths in hospital for heart attack patients, they do not do well back in the community and neither do congestive heart failure patients. We know effective ways primary-care physicians can work with their patients to get them to take the right drugs, eat the right foods and do the right things to improve their health, and keep them alive and

Adjusted rate of acute complications of diabetes per 100 newly diagnosed diabetes patients treated in emergency or hospital in Ontario, 2002/03 to 2005/06



Note: Data is age- and sex-adjusted
Source: Institute for Clinical Evaluative Sciences

Adjusted rate of death per 100 patients in the year after diagnosis of congestive heart failure in Ontario, 2002/03 to 2005/06



Note: Data is age- and sex-adjusted
Source: Institute for Clinical Evaluative Sciences

Paying attention to everyday care, every day

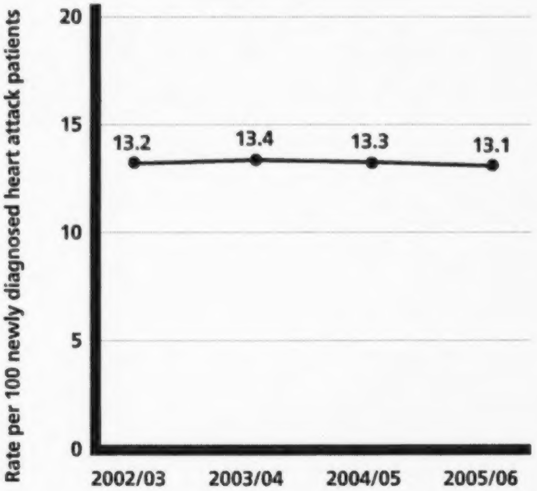
Sault Ste. Marie's innovative Group Health Centre, Sault Area Hospital and North Eastern Community Care Access Centre have worked together to develop a Congestive Heart Failure Program that improves outcomes for patients with heart failure, too many of whom were being re-admitted to hospital.

The goal of the Congestive Heart Failure Program is to develop and work within a collaborative community process of care to decrease re-admission rates to hospital and improve the patient's quality of life. Uses of standardized educational material, promotion of patient self-management skills, and a co-ordinated discharge medication prescription system to improve accuracy, compliance and safety, are key to the program's success. A cardiac rehabilitation program has recently been made available to congestive heart failure patients.

A steady drop in return visits to the hospital suggests the plan is working. Three years of data show a sustained 43 percent decrease in one-month re-admission rates, which means people are staying healthier in the community. The Congestive Heart Failure Program saves money: estimated equivalent of 527 fewer days spent in hospital at an estimated cost of $800 per day translates into savings of more than $422,000, and, fewer visits to emergency.

Joint organizers say the Congestive Heart Failure Program is cost-effective and suggest that it can be duplicated in a variety of community settings. Use of guidelines for medications and a co-ordinated multidisciplinary approach would be beneficial to any Congestive Heart Failure Program. But they caution: it's not easy to change the routine of an established health-care system.

Adjusted rate of death per 100 heart attack patients between 30 days and one year after their first heart attack, 2002/03 to 2005/06



Note: Data is age- and sex-adjusted
Source: Institute for Clinical Evaluative Sciences

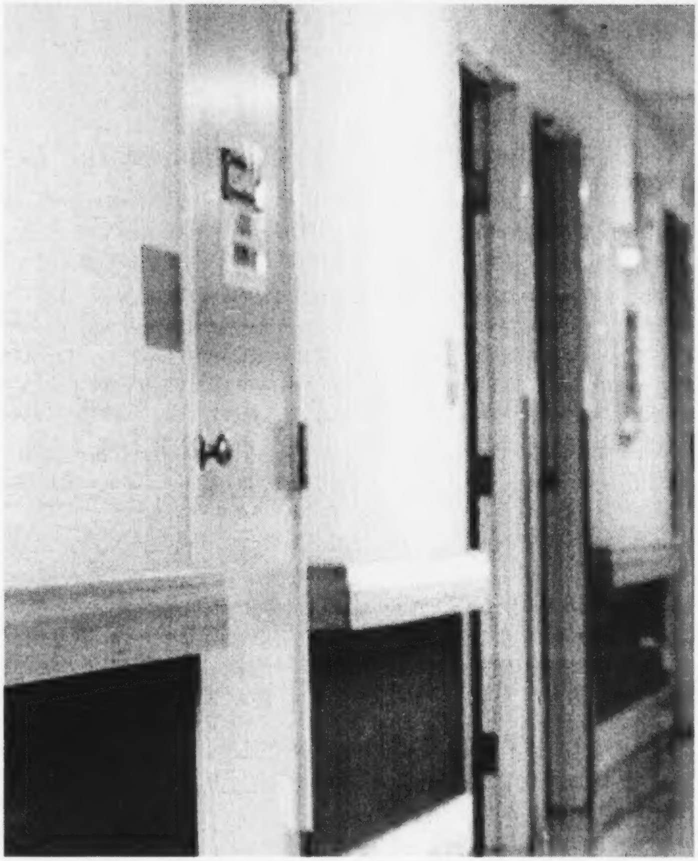
What can you do?

You can learn more about best practices for chronic disease on our website:
www.ohqc.ca/en/patient_resources.php.

Ask your doctor about working together to manage your chronic disease.

out of hospital. Not enough of them are being done.

Outcomes are not improving for these patients. In chapter three, we take an in-depth look into what is done for them and what isn't, so we can identify areas for improvement and get them used consistently and effectively across the province.



2.3 Safe

2.3.1 Overview

Most treatments and many diagnostic services involve risks for patients, but a high-performing health-care system should minimize the chance you will be injured or have a complication caused by the care you received. Not all risks can be avoided. Patients may get a rash or an upset stomach from a medication they need. Others, who are getting blood thinners to prevent clots that can cause heart attacks and strokes, may have problems because they bleed too easily. These risks are part of care. However, some injuries and complications are due to errors that could have been avoided.

It's important to keep track of avoidable harm, understand its root causes and look for ways to prevent it. It's also important to look for situations where patients were at risk, even if they weren't hurt. These mistakes that don't lead to injuries, or near-misses, can teach us a lot about how to keep patients out of harm's way. In recent years, many hospitals have been focusing on patient safety. Hospitals give complex care to the sickest patients, and the greater the complexity, the greater the risk for error.

In this section, we look at:

- Safety in acute-care hospitals
- Safety in long-term care
- Drug safety in community-based care for the elderly

2.3.2 Safety in acute-care hospitals

This year we examined two complications of hospital care, which we know can be avoided. The first was blood clots in patients after surgery, or deep-vein thrombosis. These clots, which usually develop in the legs, often after surgery, can travel to patients' lungs and cause a pulmonary embolism, which can hurt or even kill the patient. Care to avoid them includes giving patients blood thinners so the clots don't form. The second complication we looked at was infections that occur in hospital. They can be prevented if caregivers wash their hands and follow other infection-control procedures. Information on clots and infection are routinely collected in Canada and the United States to help study quality of care.[1]

Both of these complications are relatively rare, but when they occur, they can be devastating. The rates of these complications have been relatively steady over time, which suggests that we have made little progress in reducing them. We need to define targets for how low we can expect complication rates to go.

Pulmonary embolism and infection are both serious complications of medical care. To do a better job understanding and preventing them, we need to measure whether programs to reduce blood clots are working. We also need to look more closely at difficult to treat "superbugs," such as methicillin-resistant staphylococcus aureus and vancomycin-resistant enterococci. We lack good data on the rates

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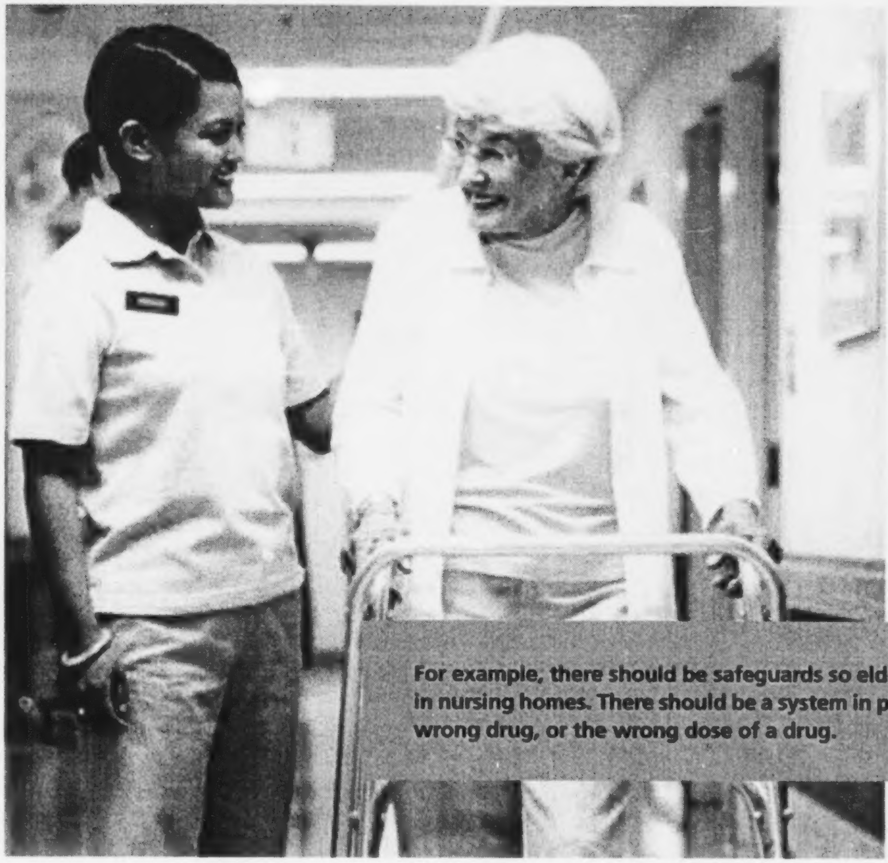
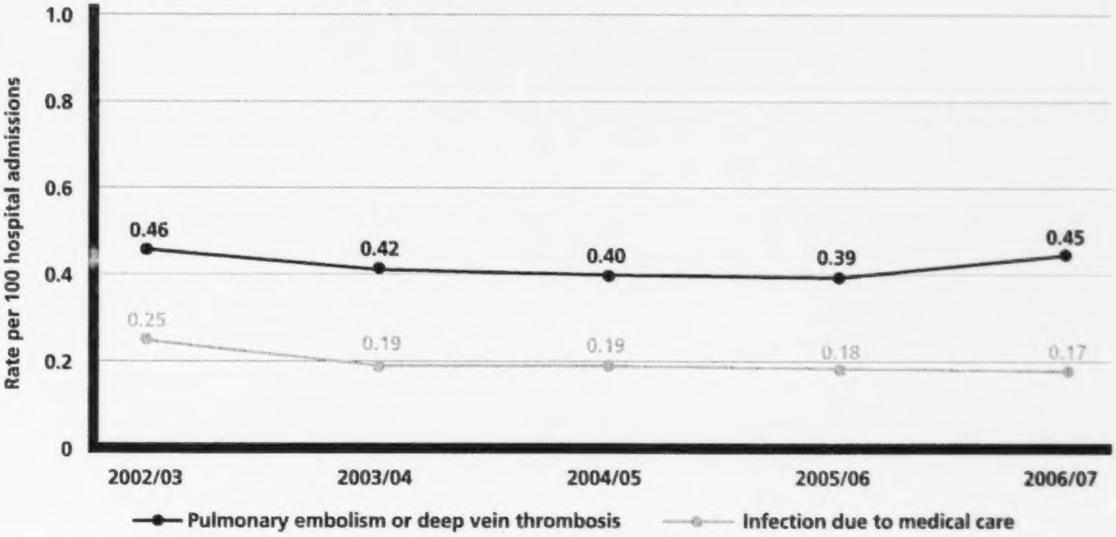
[1] The hospital standardized mortality ratio received a lot of media attention last November. It's a measure that looks at the patients in a hospital and estimates how many could be expected to die in a given year, then compares that to the number who did, to see if the hospital is doing better or worse than what might be expected. The Canadian Institute for Health Information issued its first report of this measure for a number of hospitals across the country, but it has not been used to look at trends in safety at a provincial level. We plan to look at its validity for doing that and will comment on it in next year's report.



People should not be harmed by an accident or mistakes when they receive care.

For example, there should be safeguards so elderly people are less likely to fall in nursing homes. There should be a system in place so people are not given the wrong drug, or the wrong dose of a drug.

Adjusted rate of selected in-hospital complications per 100 admissions, 2002/03 to 2006/07



Note: Data is age- and sex-adjusted
Source: Institute for Clinical Evaluative Sciences

Breathing better at Bluewater Health

We mentioned the Safer Healthcare Now! campaign earlier. It has developed plans for improving care of six common health problems dealt with by hospitals, including infections after surgery and treating heart attacks. Bluewater Health, a three-site hospital in Sarnia and Lambton county, decided to use the Safer Healthcare Now! approach to reduce cases of ventilator-associated pneumonia (VAP), which happens to patients who are breathing with the help of tubes and mechanical ventilators after an accident, surgery or other health problem.

Bluewater adopted the four-part "bundle" of actions designed to prevent the common lung infection:

- Elevate the head of the bed
- Give daily "sedation vacations" to test the patient's readiness to breathe alone
- Route tubes through the mouth rather than the nose
- Use Evac tubes to prevent secretions from gathering and causing pneumonia

Bluewater set a goal of reducing its rate of VAP by 50 percent. It introduced the action bundle in intensive care in November 2005 and in the cardiac care unit four months later. An interdisciplinary team was set up to introduce the program and to keep it going; it continues to meet monthly.

Challenges included incorporation of the daily breathing trials, use of a different route for stomach tubes and using Evac tubes, and in finding the time for staff to go to meetings and manage the program.

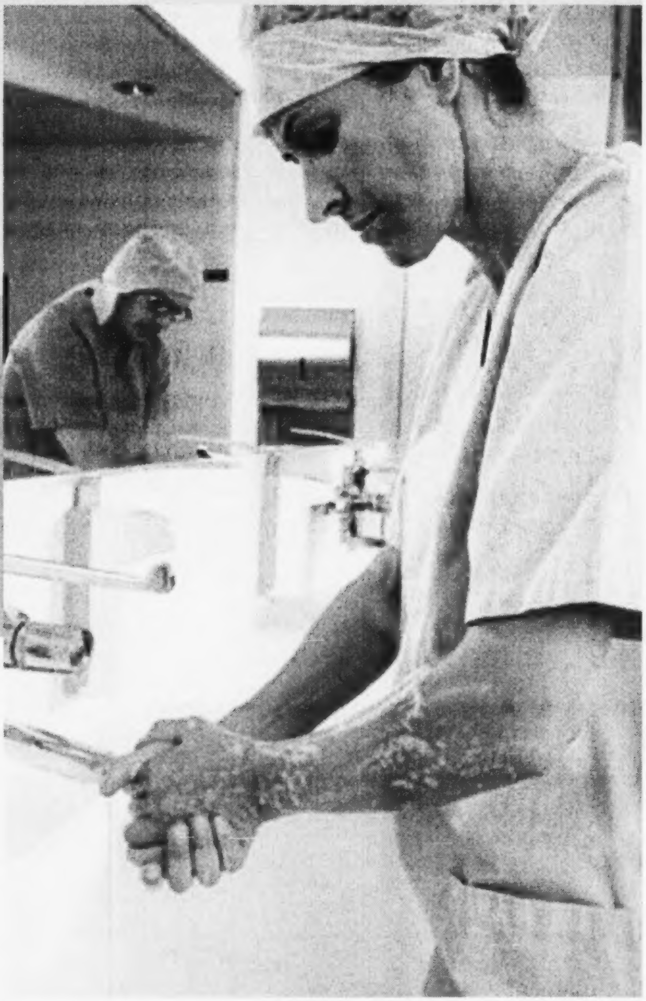
Bluewater is close to reaching its goal. Before the program began, there were 12.6 cases of ventilator-associated pneumonia for every 1,000 days patients spent on the machines. From April to October of 2007, the rate was 7.6 cases per 1,000 patient days in intensive care, and zero in the cardiac care unit.

Bluewater advises introducing the four parts of the bundle separately, not all at once, and says the VAP team should be made up of people who are motivated and want to be a part of it.

What can you do?

Encourage your local hospital to adopt the Safer Healthcare Now! campaign. Learn more about the Campaign at **www.saferhealthcarenow.ca.**

Ask your health-care providers if they've washed their hands, and make sure you wash your own regularly and thoroughly. It's the best protection against infection there is.



of these infections, and it would be useful to collect this information in the future. Other jurisdictions are already doing so. As well, there are sources of infections such as ventilators and catheters for which there are specific interventions that we know we can employ to reduce infection rates. Once again, we lack good data on the rates of these important measures of patient safety.

2.3.3 Safety in long-term care

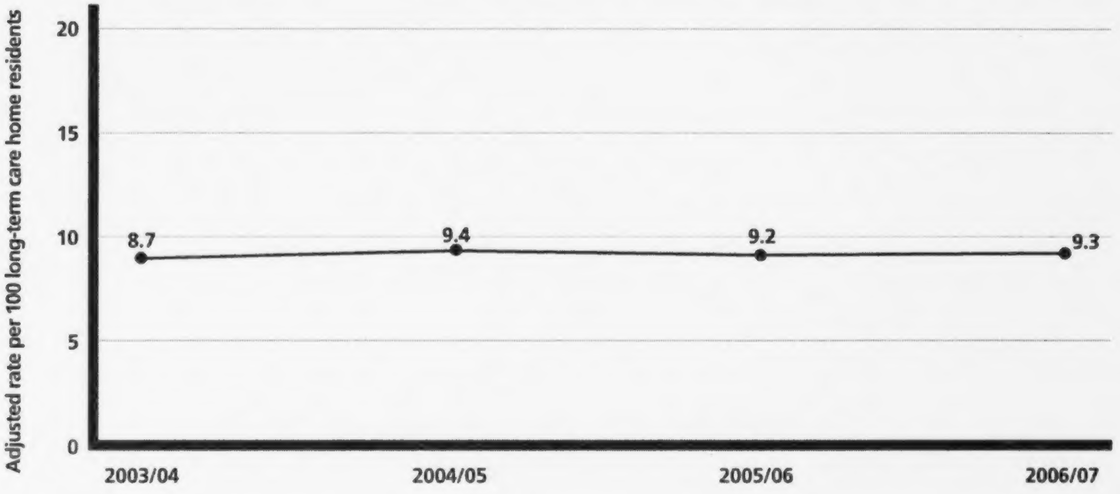
People in long-term care are typically old and frail. They usually move to residential care because they or their families believe they aren't safe in their homes any more. But nursing home residents often fall, and that can lead to fractures, head injuries and even death. Sadly, many falls could be avoided. To investigate this, we looked at data from emergency departments to find out how many people who live in nursing homes were treated for falls.

We also looked at data from the provincial drug plan (which provides free prescription drugs to seniors in nursing homes) to see how often they are given medication that experts say should not be given to seniors. Prescription drugs are an important part of keeping people healthy, but they're not all safe for use by the elderly. Some drugs are ineffective, while others have been replaced by newer drugs with fewer side effects.

Data from emergency departments show there was roughly one fall resulting in an emergency visit for every 10 people in a nursing home in 2006/07, which is about the same has it has been for several years. Since there is research that tells us how to keep nursing-home residents from falling, we're sorry not to see the number of falls going down. Also, we don't have data that tells us how Ontario compares to national or international statistics on falls in nursing homes — are we doing better or worse? And we should remember that many residents fall but don't go to emergency, so our data underestimates the total number of falls.

This is a situation that needs more attention. We need to know more about what causes these falls and whether there are things we could change to prevent them, such as not giving the elderly drugs that make them dizzy or drowsy. It would also be useful to know whether Ontario nursing homes are trying strategies such as exercise programs, which are known to reduce falls.

Adjusted rate of falls resulting in visits to emergency per 100 long-term care residents, 2003/04 to 2006/07



Note: Data is age- and sex-adjusted
Source: Institute for Clinical Evaluative Sciences

Keeping people safe while you make them well

There is such a thing as too much of a good thing. Today's medications, used properly, at the right time for the right people, work wonders. But prescribing for the frail elderly is complicated. A combination of multiple health problems and multiple providers can mean they're given medications for several conditions at once. Often, no one oversees whether the different drugs can be used together safely and effectively. And, although many drugs are well-known to be dangerous for older people because of side effects like dizziness or confusion, many are still given to seniors regularly.

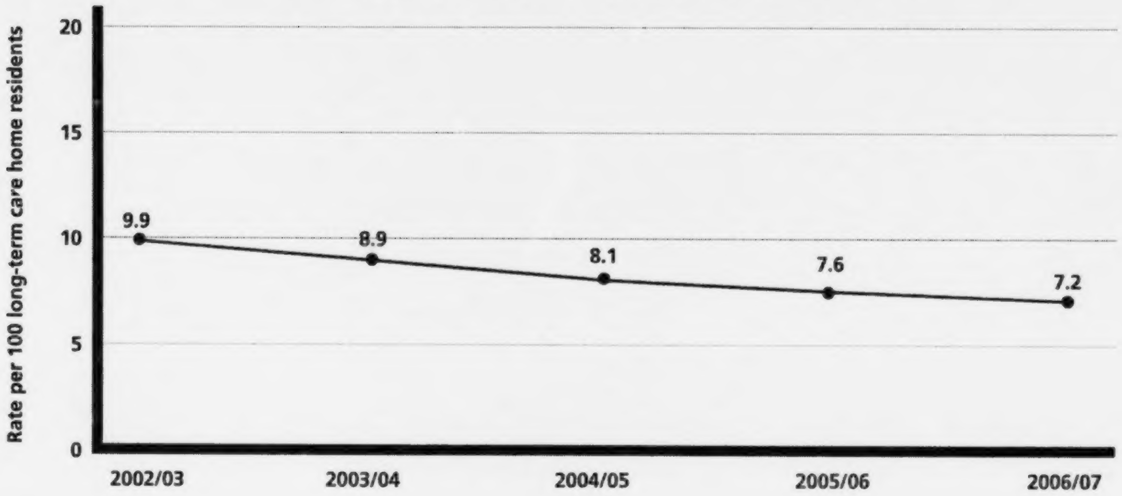
Attempts have been made to prevent this "polypharmacy," as it's called. In 1991, American Dr. Mark Beers created a list of drugs that were hazardous for senior patients. It was most recently updated in 2003. Use of drugs on the list is coming down, but in Ontario, about eight percent of drugs prescribed to seniors are on Beers' list.

A similar list developed for testing in Europe showed that in Denmark only about six percent of inappropriate drugs were prescribed. The difference may be partly because European countries tend not to pay for drugs known to do harm to seniors. As well, Denmark's National Institute of Health did a review of drug use, and gave individual physicians feedback on their prescribing habits, highlighting dangerous prescriptions.[16]

Other safety approaches include educating patients and the public about safe drugs for seniors, having multidisciplinary health teams review seniors' medications to decide which are really necessary, and keeping track of the drugs doctors prescribe and warning them if they are making dangerous decisions.

In December 2007, a risk-assessment program developed by the Institute for Safe Medication Practices and funded by the Ontario Ministry of Health and Long-Term Care was introduced in Ontario to help facilities identify ways to improve medication use.

Rate per 100 long-term care home residents with at least one inappropriate prescription, 2002/03 to 2006/07



Source: Institute for Clinical Evaluative Sciences

What can you do?

If you live in a nursing home, or have a friend or family member who does, ask the management what they're doing to keep residents safe.

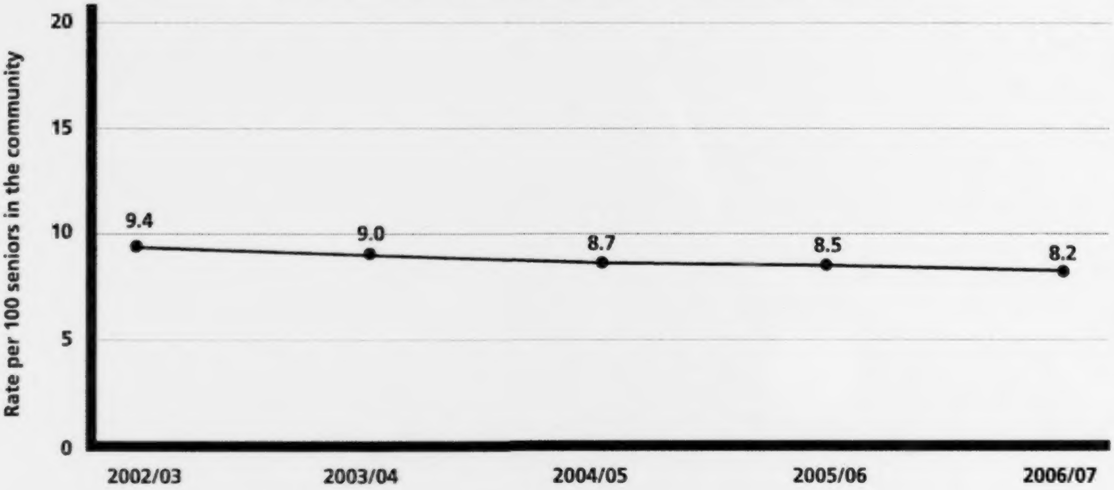
Visit the Ministry of Health and Long-Term Care website to view information on the performance of long-term care homes in Ontario, for example — you can review inspection findings or view verified complaints from either the patient and/or relative.

Go to www.health.gov.on.ca/english/public/program/ltc/30_pr_reports.html and click on "View Reports on Long-Term Care Homes/Locate a Home."

The use of inappropriate drugs in nursing home patients has decreased slowly but steadily over the last five years. The rate has gone from about 10 per 100 to close to seven per 100. However, it's worrying they're still being used in frail residents at all in nursing homes, which are supposed to monitor and review medication. Different sources of information on the situation make comparisons to other places difficult, but it appears the use of these drugs is a substantial problem all over the world, despite advice from experts they should be used very rarely, if at all. We need more information on why drugs that experts say are inappropriate are being given to long-term care patients in Ontario.

Last year we reported on bed sores on patients in chronic-care hospitals. We would have liked to have data this year on bed sores in nursing home residents, but there are no accurate province-wide data on this important

Rate of inappropriate prescribing per 100 seniors in the community, 2002/03 to 2006/07



Source: Institute for Clinical Evaluative Sciences

problem. The Ontario government is working with nursing homes to collect this information and we look forward to reporting it in the future.

2.3.4 Drug safety in community-based care for the elderly

Unfortunately, seniors living in the community may be even more vulnerable to the dangers of having potentially inappropriate prescriptions than people in long-term care homes. Several research studies show that prescribing inappropriate drugs to elderly patients in the community can lead to hospital stays and poorer quality of life because of related health problems.

Although rates of inappropriate drug use are falling, they're decreasing more slowly for people in the community compared to residents of nursing homes. The research we used shows 9.4 seniors out of every 100 living in the community were given inappropriate drugs in 2003/04. The rate had fallen to 8.2 for every 100 in 2006/07. Since there are 1.2 million seniors living the community in Ontario, that means about 120,000 people aged 65 and over had prescriptions filled for a drug that at best was doing them no good and at worst was putting them at risk of harm.

What can you do?

Get a second opinion on your prescriptions.
Under the MedsCheck program, all Ontarians who take three or more prescription medications for chronic conditions can receive a free one-on-one review of their medications from a pharmacist, once per year. A follow-up MedsCheck is also covered if you've been recently discharged from hospital and need to have medication changes double-checked. Look for details on the MedsCheck website: www.medscheck.ca.

To check prescriptions to see if they're on the list of drugs hazardous for seniors (known as "Beers list"), go to: www.cbc.ca/news/background/seniorsdrugs/beers_table_more.html#b or see the original article.[17]

If you or a family member or friend is prescribed one of the Beers list drugs, ask the doctor why.

2.4 Patient-centred

2.4.1 Overview

In a high-performing health-care system, there should be a partnership between patients and health-care providers that's based on consideration, respect and communication. People who work in a system that puts high value on patient-centred care make an effort to communicate and involve patients in decisions about their care. Patient-centred health care isn't done to you, it's done with you.

Assessing the quality of efforts to be patient-centred isn't easy. We're still looking for the best way to define and measure patient-centred care. One measure which we use in this report is patient satisfaction, gathered through surveys. Satisfaction, however, is an outcome of care, and doesn't capture whether the patient was involved in making decisions. The Commonwealth Fund survey went beyond just asking patients if they were satisfied with the quality of care they received from their doctor and looked at three aspects of care that better reflect patient-centred care. They were whether the patient felt the doctor explained things well, the extent to which they felt the doctor involved them in decisions and whether they were satisfied that the doctor had spent enough time with them.

Health-care providers should offer services in a way that is sensitive to an individual's needs and preferences.

For example, you should receive care that respects your dignity and privacy. You should be able to find care that respects your religious, cultural and language needs and your life's circumstances.

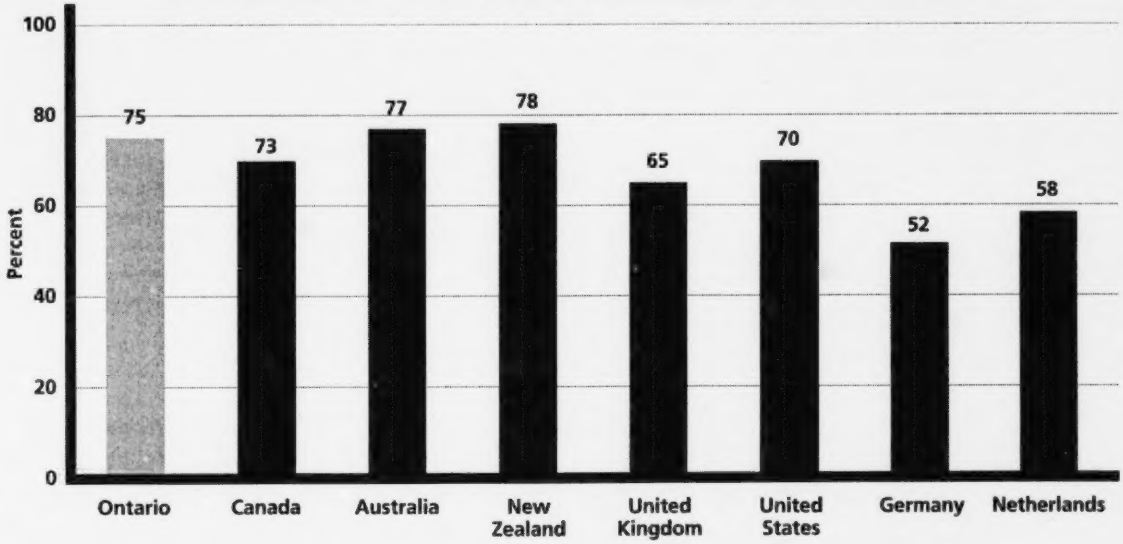
There is research that shows patients who are involved in their care and satisfied with it are more likely to follow the advice they're given about managing their conditions. We looked at patient experience with care in three settings:

- Community-based physician care
- Hospital acute care
- Emergency department care

2.4.2 Patient experience with community-based physician care

How patients feel about the quality of care they're given has an impact on the overall quality of care in the system, because, as taxpayers, they expect the public system to provide satisfactory care. If enough individual experiences are bad, the system will be judged to be faulty by the people who pay the bills. Generally, although not overwhelmingly, people say they're satisfied. In Ontario, as in Canada and several other of the countries surveyed, about three out of four people surveyed say the quality of the care that they received from their doctor over the last year was excellent or very good. However, the rates are lower — closer to one out of two — in Germany and the Netherlands.

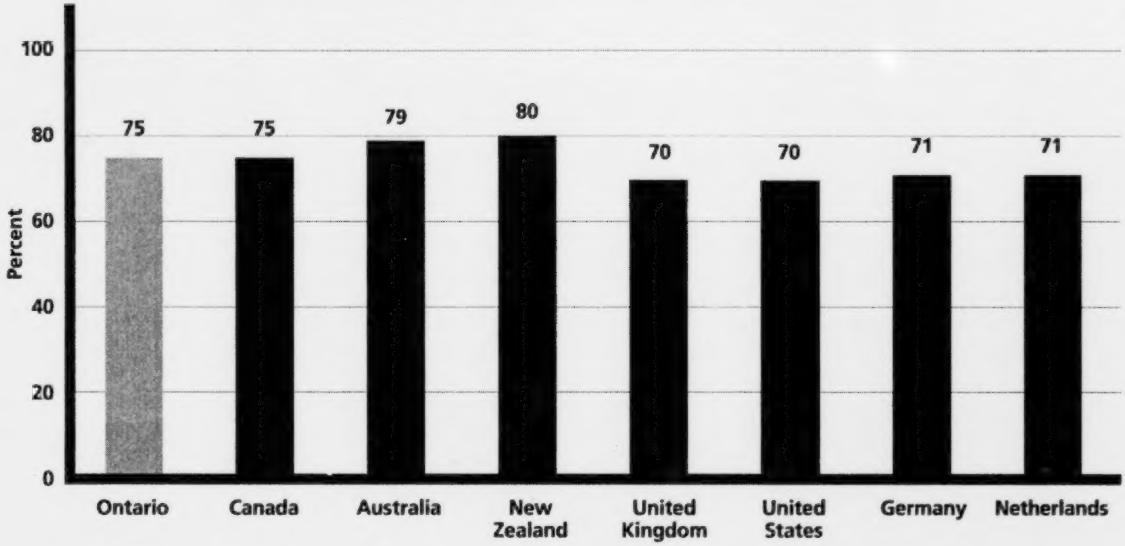
Percentage of adults who have a regular doctor or place of care who rate the overall quality of medical care they received in the past 12 months as excellent or very good, in Ontario and by country, 2007



Note: Country level data is weighted to reflect demographic composition of the country from the latest census; Ontario level data is not weighted

Source: Health Council of Canada. 2007: Commonwealth Fund 2007 International Health Policy Survey of the General Public's Views of their Health Care System's Performance in Seven Countries

Percentage of adults who have a regular doctor or place of care who said this provider always explains things in a way they can understand, in Ontario and by country, 2007



Note: Country-level data is weighted to reflect demographic composition of the country from the latest census: Ontario-level data is not weighted

Source: Health Council of Canada, 2007; Commonwealth Fund 2007 International Health Policy Survey of the General Public's Views of their Health Care System's Performance in Seven Countries

In Ontario and across Canada three out of four people felt their doctor explained things in a way they could understand, similar to the proportion in other countries surveyed.

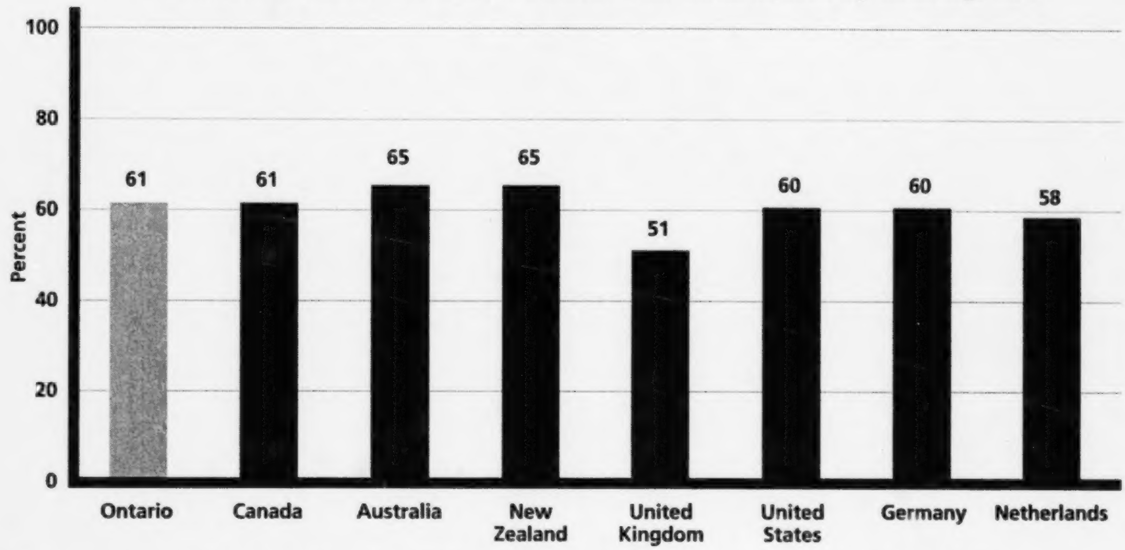
This moderate success in delivering excellent and very good care and giving understandable explanations does not seem to translate to a lot of empowerment for patients. In the surveyed countries, only about three people out of five said their doctor involved them in treatment options, except in the U.K., where the rates were even lower. Only half of Britons feel they're engaged in making treatment decisions with their doctor.

Satisfaction varied when it comes to whether patients think their doctors spend enough time with them. In Ontario, Canada as a whole, the U.K. and the U.S., about six of 10 patients were satisfied with how much time the doctor spent with them. The rate was closer to seven out 10 in the other countries surveyed.

Overall, Ontarians are about as satisfied with the quality of care they get from their physicians as people in the other countries surveyed. But that means about one in four people here rate the quality of care as less than very good. A substantial proportion of residents feel things are not explained adequately and they're not involved in decisions about their care. It's interesting that despite three-quarters of Ontarians thinking they get excellent or very good care, a large number (42 percent) still don't think their physician spends enough time with them. These results suggest that there are important aspects of the doctor-patient relationship to be fixed in Ontario, but the international results seem to show many health-care systems are facing the same problems.

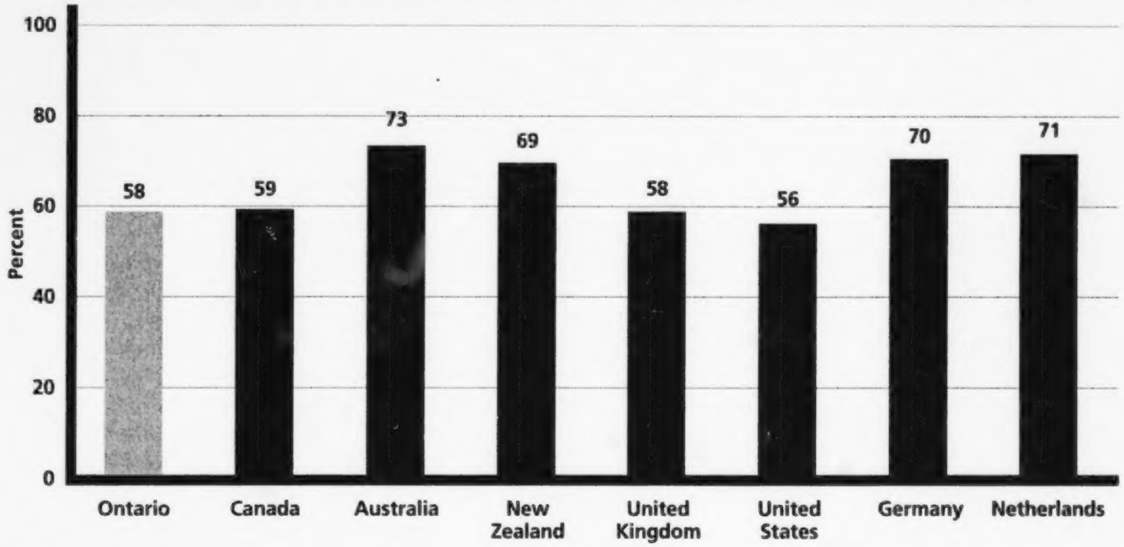
What this information doesn't tell us is what patients were expecting from their physicians, which makes their disappointment harder to interpret. As we embark on primary-care reform in Ontario, we should try to clarify what we mean by patient-centred care and what our expectations are for partnerships among doctors, patients and other care providers. There has been important work done here in Ontario and in other places on how we might best measure patient-centred care.[18, 19] The Ontario Health Quality Council will be working over the next year to see how this important attribute of primary care can be measured and reported to the public.

Percentage of adults who have a regular doctor or place of care who said this provider always tells them about treatment options and involves them in decisions about the best treatment, in Ontario and by country, 2007



Note: Country-level data is weighted to reflect demographic composition of the country from the latest census; Ontario-level data is not weighted
Source: Health Council of Canada, 2007; Commonwealth Fund 2007 International Health Policy Survey of the General Public's Views of their Health Care System's Performance in Seven Countries

Percentage of adults who have a regular doctor or place of care who said this provider spent enough time with them, in Ontario and by country, 2007



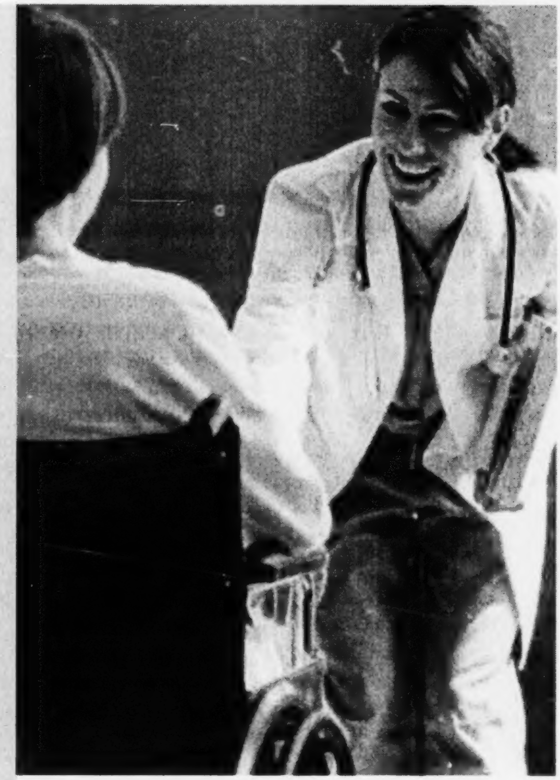
Note: Country-level data is weighted to reflect demographic composition of the country from the latest census; Ontario-level data is not weighted
Source: Health Council of Canada, 2007; Commonwealth Fund 2007 International Health Policy Survey of the General Public's Views of their Health Care System's Performance in Seven Countries

Patients at the centre, care all around: new approaches to primary care

Efforts to reform how basic health care is delivered are not new. It's been agreed for some time that teams of health-care providers, including physicians, nurses and nurse practitioners, therapists and even social workers who work together to provide care can do more to meet the needs of the ill than a single busy family practitioner. Later, in chapter three, we discuss several approaches Ontario is taking to create better models of primary care to improve patients' experiences.

Recognizing that teams don't just happen, the Ministry of Health and Long-Term Care created the Interprofessional Care project. Its Blue print for Action, released in July 2007, aims to build patient-centred care, starting by educating future health-care providers of all types together, so they get used to collaborating on care. It calls for the different professions to include team-based practice in their standards and for organizations, policy planners and law makers to lay the ground work for team care to flourish.

The Commonwealth Fund agrees that using interdisciplinary teams and innovations such as nurse-led care increase patient engagement with their primary-care practice, but they add that the strongly positive experiences reported by Australian and New Zealand patients indicate that physicians having more time to spend with their patients makes quite a difference in patient satisfaction.[19]



2.4.3 Patient experience with acute-care hospital and emergency department care

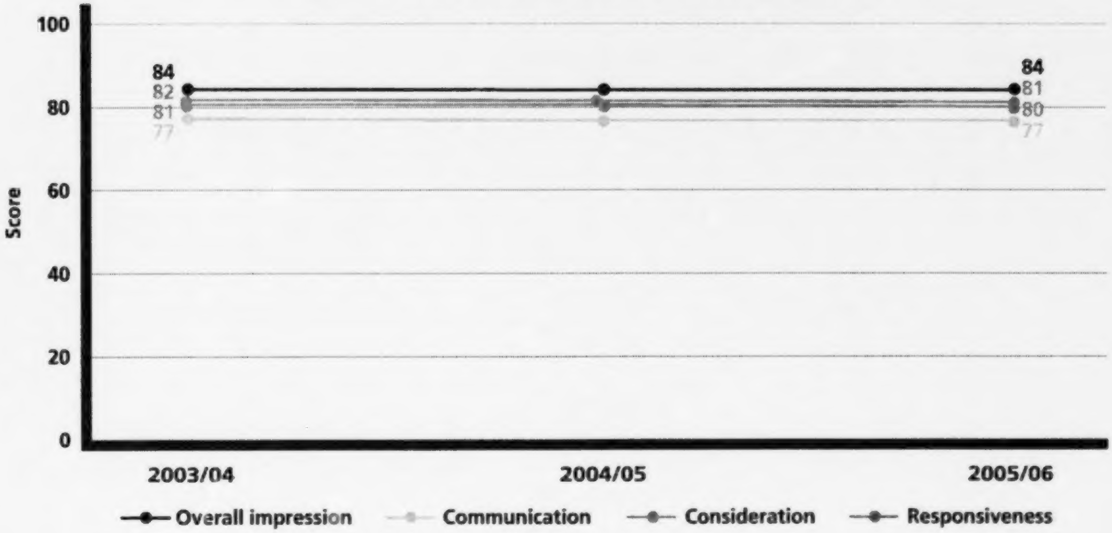
Communication, consideration and responsiveness are all important aspects of patient-centred care. Care in hospitals and emergency departments often involves a range of providers managing complicated conditions, trying to make sure patients get the care they need quickly, while helping them understand what's wrong and how it can be treated. At the same time, patients are sick and vulnerable and particularly in need of care that's responsive and considerate and caregivers who are reassuring and good communicators.

The Hospital Report, a joint project of the Ontario government and the Ontario Hospital Association, has been collecting data on patients' experiences in acute-care hospitals and emergency departments for several years. Not all Ontario hospitals are involved, but the report gives an overview of satisfaction with hospital and emergency care and some detailed information on patients' perceptions of communication, consideration and the responsiveness of care. Answers were rated on scales from zero to 100. The closer the score is to 100, the better the hospital is doing.

The results from the acute-care hospitals show little change in either overall satisfaction or in the scales that deal with communication, consideration and responsiveness over the years. People's general satisfaction is higher than their opinions of communication, consideration and responsiveness. There's a suggestion in the emergency-department numbers that communication has improved a little.

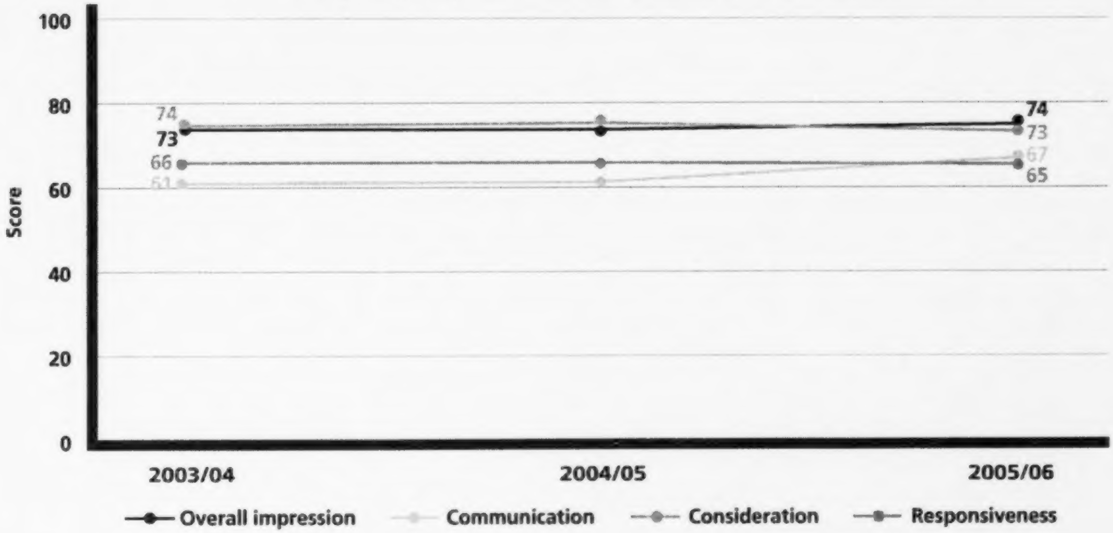
There's an enormous amount of data on patient experience with hospital and emergency care. If we could study it we might get a better idea of what drives these results — why, for example, are a third of patients dissatisfied with communication in emergency? Why do about the same proportion find care in emergency unresponsive? As well, some hospitals consistently do better than others on these measures. If we knew why, it could help others improve their performance.

Patient satisfaction and patient experience score for acute care in Ontario, 2003/04 to 2005/06



Source: Hospital Reports Research Collaborative. Hospital Reports 2005: Emergency Department Care — Patient Satisfaction: Hospital Reports 2006: Emergency Department Care — Patient Satisfaction: Hospital Reports 2007: Emergency Department Care — Patient Satisfaction

Patient satisfaction and patient experience score for emergency departments in Ontario, 2003/04 to 2005/06



Source: Hospital Reports Research Collaborative. Hospital Reports 2007: Emergency Department Care — Patient Satisfaction, Hospital Reports 2005: Emergency Department Care — Patient Satisfaction

Staying on top of your case when you're sick

Your Health Care — Be Involved is a patient empowerment and education program to increase patient knowledge of the role they can play in improving their health care and their safety. As patients, we're often told it's important to be part of our own health-care team, but putting that into practice when you're sick can be a challenge. Your Health Care — Be Involved was created by the Ontario Hospital Association (with funding from the Ministry of Health and Long-Term Care). Through materials such as posters and brochures — available in 14 languages — the program gives tips on being an informed patient:

1. Be involved in your health care. Speak up if you have questions or concerns about your care.
2. Tell a member of your health-care team about your past illnesses and your current health condition.
3. Bring all of your medicines with you when you go to the hospital or to a medical appointment.
4. Tell a member of your health-care team if you have ever had an allergic or bad reaction to any medicine or food.
5. Make sure you know what to do when you go home from the hospital or from your medical appointment.

While the posters display all five tips, the brochure provides additional detail on each of the five tips and includes suggested questions for patients to ask their health-care team such as "What should I do when I go home?" to "What is the purpose of this test or treatment?" The brochure also lists some of the things patients should tell their health-care team, including whether they have a chronic disease or allergies and any herbal remedies and food supplements they are taking.

The program was originally launched in September 2005 with a re-launch following in October 2007. An initial survey was conducted in the early stages of the campaign. Based on the overwhelming uptake from hospitals and feedback from providers and patients alike, it is clear that this program has made a significant on patient education and empowerment in the area of patient safety.

What can you do?

For more on questions to ask your health-care provider, go to **www.ohqc.ca,** then click on "Patient Resources."

2.5 Equitable

2.5.1 Overview

In a high-performing health-care system, the quality of care you receive should be based on need, not other factors such as age, sex, ethnicity, education, income, or where you live. If quality of care varies for that kind of reason, then we should be concerned the system is not equitable.

Each year we examine this important attribute from a different perspective. Last year we looked at equity as it related to Ontario's Aboriginal and immigrant populations. This year we deal with how geography affects equity. Ontario is a vast province with many small rural communities located far from major centres. Distance can keep people from getting the care they need.

For this report, we use a measure developed by the Ministry of Health and Long-Term Care and the Ontario Medical Association called the Rurality Index of Ontario. It uses a range of factors such as distance to medical resources, population, social indicators and weather patterns to determine which areas are rural. There are differences between rural and remote areas, however for this report we've defined rural as those places that qualify, according to the index, for special programs for physician services in rural areas. Using this cut-off, about one in eight Ontarians live in a rural area.

We picked several of the measures already discussed in this year's report to look at whether quality of care is affected by living in a rural area. We've included:

- Having a regular doctor
- Availability of specialized services
- Deaths within a year of being diagnosed with congestive heart failure
- Use of inappropriate drugs by the elderly
- Overall satisfaction with care by doctors

2.5.2 Equity for rural and urban Ontarians

Data from the Primary Care Access Survey, regularly done by York University for the provincial government, show that where you live makes very little difference to whether you have a regular doctor.

Proportion of Ontario population (18 years and older) who have a regular medical doctor by rural/urban residence, 2007

	Percent with family doctor	Percent with chronic disease who have a family doctor
Rural	90.4	93.0
Urban	92.0	94.7

Source: Institute for Clinical Evaluative Sciences

People should get the same quality of care regardless of who they are or where they live.

For example, if you don't speak English or French it can be hard to find out about the health-care services that you need and to get those services. The same can be true for people who are poor or less educated, or for those who live in small or far-off communities. Extra help is sometimes needed to make sure everybody gets the care they need.

Data on the specialized services addressed by the Wait Time Strategy show that use of cataract and CT scans is nearly identical in urban and rural sites. That was a big improvement for CT scans — rural residents used to get 11 percent fewer than people in urban areas. Rural residents have higher rates of hip replacement than urban ones, which other countries have also found.[21, 22] It may be due to more people in rural areas suffering arthritis.[23]

Adjusted rates of cataract surgery by rural/urban residence, per 100,000 population, 2002/03 to 2006/07

	2002/03	2003/04	2004/05	2005/06	2006/07
Rural	1,153	1,195	1,261	1,420	1,456
Urban	1,093	1,103	1,172	1,342	1,471

Note: Data is age- and sex-adjusted
Source: Institute for Clinical Evaluative Sciences

Adjusted rates of CT scans by rural/urban residence, per 100,000 population, 2002/03 to 2006/07

	2002/03	2003/04	2004/05	2005/06	2006/07
Rural	7,108	7,812	8,771	9,904	11,191
Urban	7,910	8,385	9,356	10,394	11,217

Note: Data is age- and sex-adjusted
Source: Institute for Clinical Evaluative Sciences

Adjusted rates of hip replacement by rural/urban residence, per 100,000 population, 2002/03 to 2006/07

	2002/03	2003/04	2004/05	2005/06	2006/07
Rural	96.2	100.8	120.2	129.8	130.0
Urban	75.0	77.4	85.8	96.8	100.3

Note: Data is age- and sex-adjusted
Source: Institute for Clinical Evaluative Sciences

Congestive heart failure death rates are similar in both groups, and did not change over time in either group.

Adjusted rates of death per 100 patients newly diagnosed with congestive heart failure by rural/urban residence in Ontario, 2002/03 to 2005/06

	2002/03	2003/04	2004/05	2005/06
Rural	16.07	15.94	16.79	15.68
Urban	15.98	15.82	15.78	15.81

Note: Data is age- and sex-adjusted
Source: Institute for Clinical Evaluative Sciences

Seniors in rural areas are more likely to receive an inappropriate medication than those in urban areas, but it's good news the number of inappropriate prescriptions is declining in both groups.

Rates of at least one inappropriate prescription per 100 seniors in the community by rural/urban residence, per 100,000 population, 2002/03 to 2006/07

	2002/03	2003/04	2004/05	2005/06	2006/07
Rural	10,680	10,230	9,900	9,780	9,480
Urban	9,280	8,890	8,560	8,370	8,070

Source: Institute for Clinical Evaluative Sciences

The data from the Primary Care Access Survey show very small differences in satisfaction with care.

Proportion of Ontario population (aged 18 years and older) satisfied with their care when sick by rural/urban residence, 2007

	Percent satisfied with care when sick	Percent with chronic disease satisfied with care when sick
Rural	93.5	93.6
Urban	92.1	92.5

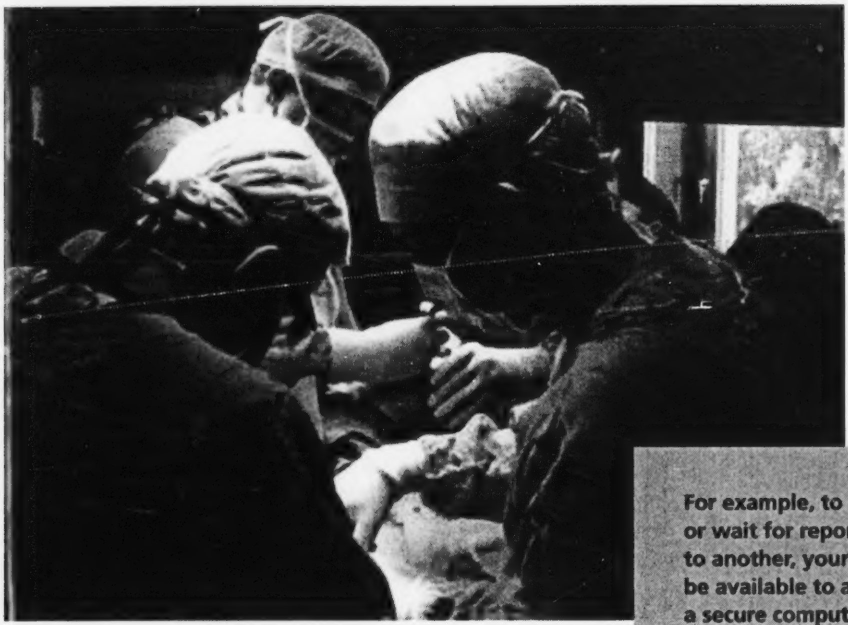
Source: Institute for Clinical Evaluative Sciences

Applying the rurality index to these particular measures for quality of care shows Ontario does a pretty good job of ensuring care doesn't vary much for those who live in rural areas and those who do not. There are some areas where rural residents appear slightly worse off, such as in use of inappropriate medications. The higher rates of joint replacement in rural areas are probably because of greater need.

The province has introduced programs to try to get rural Ontarians the health care they need. There are special payments to get doctors to work in rural areas, and in recent years, more training programs for physicians, nurses and other professionals have opened up in northern Ontario. That's partly so people from the north don't have to travel as far to get an education, and partly from the belief that people who are educated in big-city hospitals are reluctant to work in a rural or remote health centre. Telemedicine, which we discussed earlier, is also designed to make it easier for patients outside larger centres to consult specialists and get certain tests done.

Our analysis does not suggest that there are no inequities in care based on where people live. The cut-off in the rurality index is one way to look at this issue, but we know people who live in very remote areas can face real barriers reaching doctors and hospitals. Different measures may have revealed particular challenges for people who live in rural areas, for example, these measures do not show the extra time and effort it costs people living in rural areas to get medical help.

There's another issue we didn't look at that affects health care profoundly. We know people living in rural areas are less healthy overall, which may be an issue of equity in health care. A detailed review of the issue of urban-rural equity can be found in the work of the Canadian Population Health Initiative.[24]



The health system should continually look for ways to reduce waste, including waste of supplies, equipment, time, ideas and information.

For example, to avoid the need to repeat tests or wait for reports to be sent from one doctor to another, your health information should be available to all of your doctors through a secure computer system.

2.6 Efficient

2.6.1 Overview

Reducing waste and improving efficiency save money without taking away care. The money saved can be freed up to improve other areas of the health-care system. A high-performing health system should always be on the lookout for waste of money, resources or time and for ways to reduce that waste.

Giving unnecessary care is a waste. When someone gets a CT scan they didn't need, we waste both staff and patient time. Tests that are repeated because the doctor can't get hold of a previous test are also a waste.

Waste is not unique to health care and other industries are always looking for ways to produce equivalent or better products for less. Some may involve investing in new systems while in other cases becoming more efficient means changing policies or procedures. Health care does have examples where we have become more efficient — many surgeries that used to require a lengthy hospital stay are now done just as safely and effectively in less costly day-surgery centres. Yet there is much more that we can do.

This year, we looked at opportunities to reduce waste and increase efficiency in three health-care settings:

- Visits to emergency departments that could be done in a doctor's office
- Unnecessary tests for people having cataract surgery
- Use of expensive drugs in the community when less costly drugs are just as good

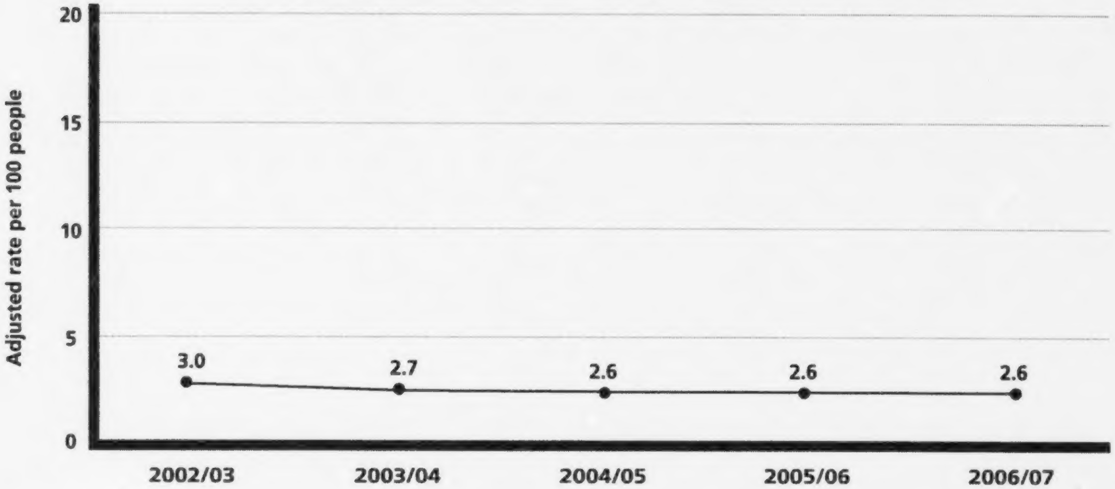
2.6.2 Visits to emergency that could be done in a doctor's office

Emergency departments are designed to care for acutely ill patients who should not wait to get care. However, some visits are for mild problems like ear infections and colds that could easily be treated in a doctor's office. Those visits are wasteful because emergency departments are more expensive to staff and maintain than a doctor's office.

For this section we compared data on emergency department visits to estimates of the Ontario population to measure the rate of visits for conditions that could be treated in doctors' offices. We found the rate of unnecessary visits has been relatively steady at about 2.6 per 100 people over the last few years. In the latest year for which we have data, there were just over 300,000 visits to Ontario emergency departments for problems that could be treated elsewhere. With five million total visits, they account for about six percent of all visits to emergency.

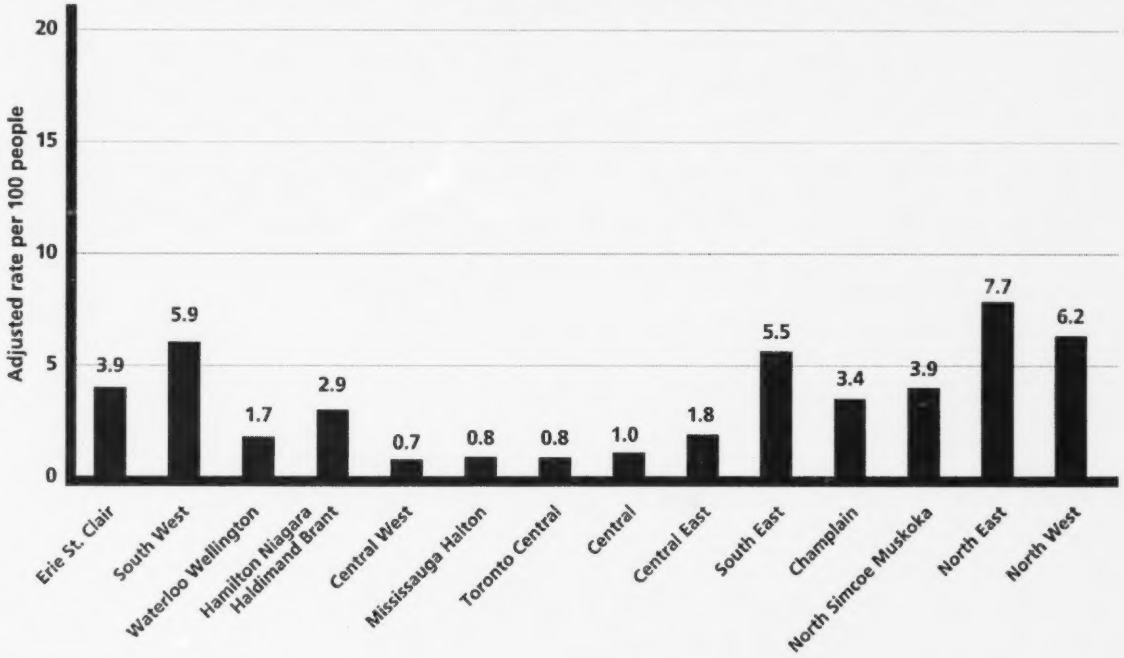
Six percent is a relatively small amount of the overall use and research suggests patients who are not very sick don't have a big impact on waits in emergency. However, there are 300,000 of these visits every year. Even if they cost just a few dollars more than care in a doctors' office, they are likely wasting money.

Adjusted rate of visits to emergency for conditions that could be treated elsewhere, per 100 persons, 2002/03 to 2006/07

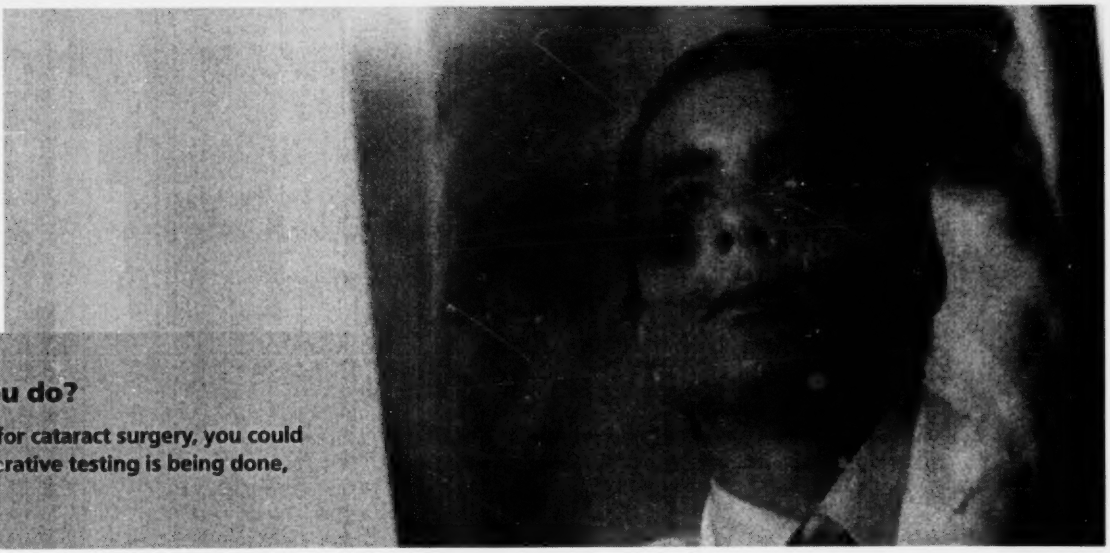


Note: Data is age- and sex-adjusted
Source: Institute for Clinical Evaluative Sciences

Adjusted rate of emergency department visits which could be treated elsewhere, by local health integration network, per 100 people, 2006/07



Note: Data is age- and sex-adjusted
Source: Institute for Clinical Evaluative Sciences



What can you do?

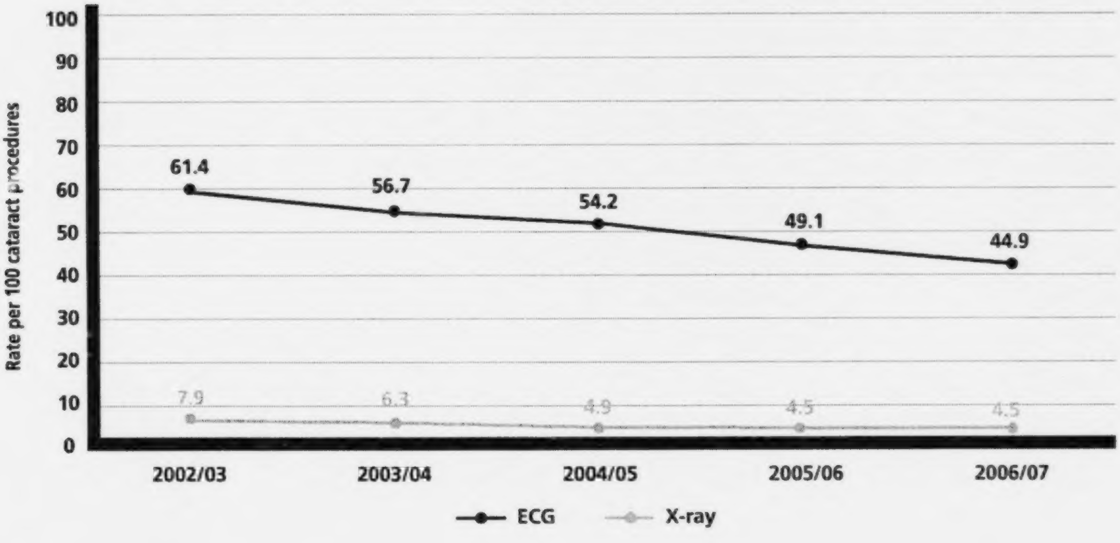
If you are going for cataract surgery, you could ask what pre-operative testing is being done, and why.

The rates of these visits vary across the province. They are two or three times higher in the more rural local health integration networks. That may be because smaller communities are not big enough to have an after-hours clinic and emergency department open at the same time. In that case, the higher use of emergency for minor conditions may be reasonable.

2.6.3 Unnecessary tests before cataract surgery

Having surgery usually means having tests beforehand to get health information and determine potential risks. Patients with particular health problems may need extra tests. Yet some tests continue to be done even though they're no longer considered necessary for safety or good health. Studies show that routine electrocardiograms and

Rate of pre-operative testing per 100 cataract procedures, 2002/03 to 2006/07



Source: Institute for Clinical Evaluative Sciences

It's an old standard, and high time to change the tune

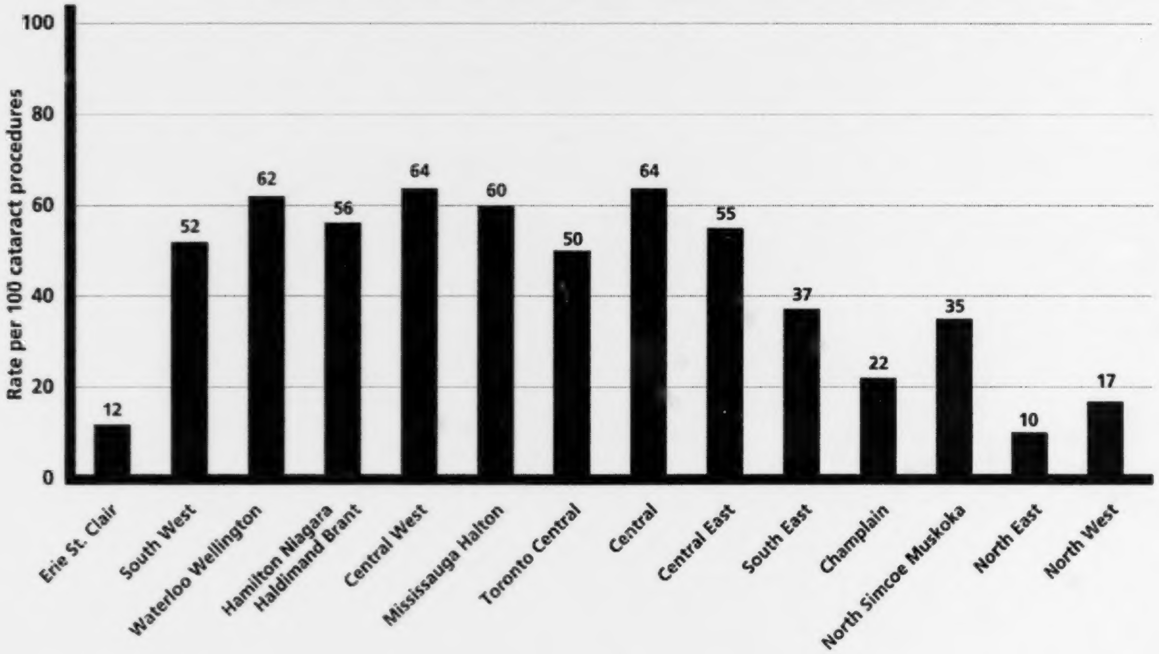
Several organizations, including the Canadian Anesthesiologists' Society and the Ontario Preoperative Task Force, have published guidelines on testing patients before their surgery — guidelines that recommend dropping tests that don't benefit patients, like electrocardiograms before cataract surgery — and yet individual doctors, hospitals and health regions are still holding on to their outdated practices.

A study at the Ottawa Hospital found despite a new policy based on expert guidelines and agreed to by the departments of anesthesiology, surgery and nursing, there were still a large number of unnecessary tests. It turned out anesthesiologists and nurses were reluctant to cancel tests ordered by a colleague. The study's authors found changing the established behaviour would require educating surgeons and supporting staff who wanted to cancel the unnecessary tests.[27]

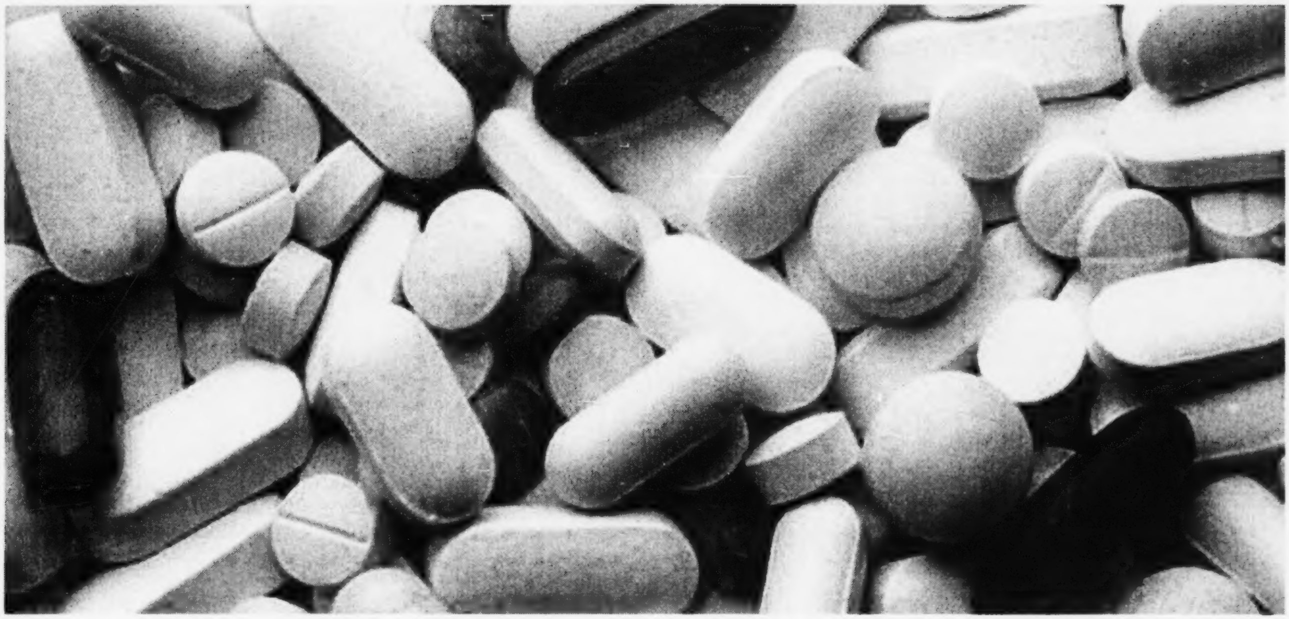
One health organization in Alberta found it was better to get away from standardization and checklists, and base pre-op testing on the individual;[28] but a study in New Zealand said the opposite, saying pre-op test orders were haphazard before it introduced checklists.[29]

In Ontario, the Wait Time Strategy gives "Standardizing best practices for both medical and administrative functions in order to improve patient flow and efficiency" as one of its four aims for increasing access and reducing waits.

Adjusted rate of preoperative electrocardiograms per 100 cataract procedures, by local health integration network, 2006/07



Note: Data is age- and sex-adjusted
Source: Institute for Clinical Evaluative Sciences



chest X-rays before cataract surgery do no good to the patient[25] and one Canadian study showed we could save about $35 per patient by dropping these and other tests.[26] In Ontario, we do well over 100,000 cataract operations a year. This is a clear opportunity to save money and still provide high-quality care. We could probably reduce pre-operative testing in many other common surgical procedures, which could provide substantial savings to the health-care system.

Using hospital and physician billing data, we found a steady decline in the use of both electrocardiograms and chest X-rays over the last five years. Fewer than five percent of cataract patients are getting chest X-rays before their procedure, but more than 40 percent still get electrocardiograms.

Previous research has shown the rates of pre-operative testing vary widely from hospital to hospital. We found that's true among local health integration networks as well.

Unnecessary X-rays before cataract surgery are not much of a problem anymore. However, rates for electrocardiograms, though falling, are still quite high: almost 60,000 patients, or four out of every 10 cataract patients, had an electrocardiogram before surgery in 2006/07. Also, there's substantial variation across health integration networks in doing electrocardiograms, with some regions having rates six times higher than others. Studying hospitals with low rates could give us ideas on how to reduce them in hospitals that don't do so well. It would also be useful to look at other low-risk surgeries and see if more tests that do nothing for patient safety or health could be dropped.

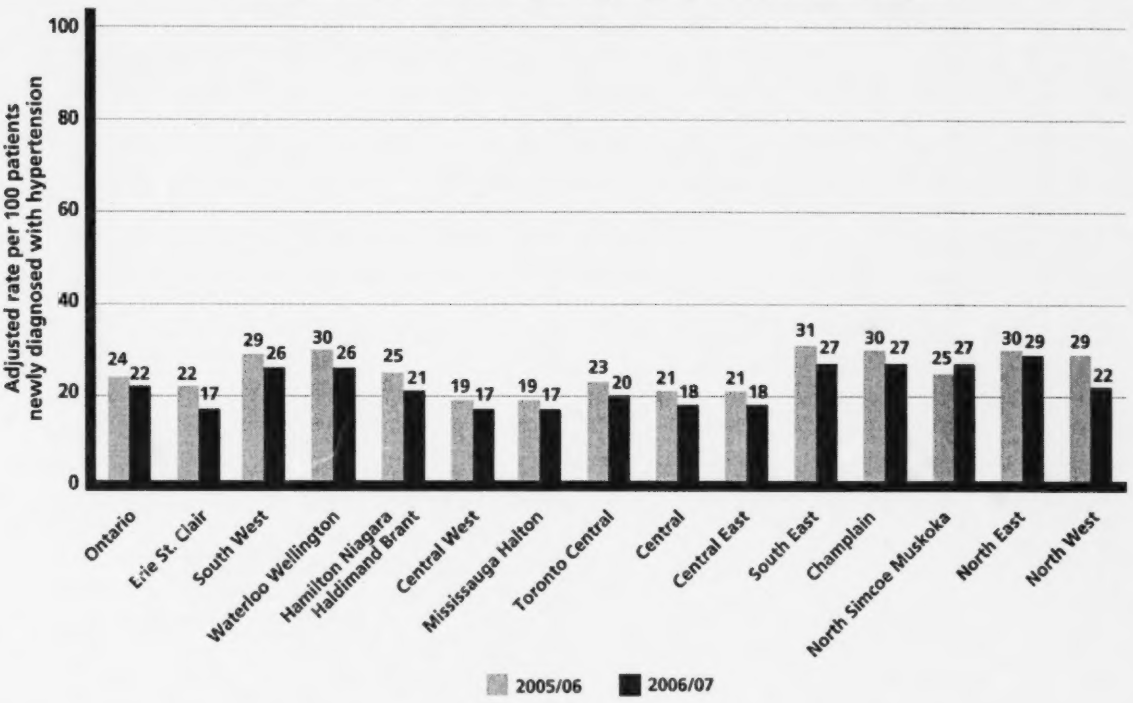
2.6.4 Use of expensive drugs when lower-cost alternatives are available

High blood pressure, or hypertension, strains the heart and can lead to heart failure, heart attacks, stroke, aneurysms, kidney failure and eye damage. Prescription drugs are an important part of treatment. Ontario's Guidelines Advisory Committee weighs research evidence and makes recommendations to physicians on the best choices for care.[30] For hypertension, a class of drugs called thiazides (one type of diuretic or "water pill") should be the first choice for new patients with hypertension, except for those who have certain other conditions such as diabetes, coronary artery disease, chronic liver disease, stroke or heart failure. Thiazides are as effective or better than other drugs but cost pennies a day, while newer drugs can cost $4 or $5 a day.

We used data from the provincial drug benefit plan to identify seniors starting treatment for high blood pressure, who did not have one of the conditions listed above. We found that only one in five patients started their treatment with a thiazide. The provincial drug plan could significantly reduce costs without reducing quality if thiazides were selected as the first choice in the majority of patients.

We only compared two years, so it's difficult to draw a conclusion about trends, but the rate of people treated with thiazides as a first choice went down in 13 of Ontario's 14 local health integration networks between 2005/06 and 2006/07. There was also substantial variation between regions, as rates of thiazide use were twice as high in some local health integration networks.

Adjusted rate of prescribing a thiazide as their first antihypertensive medication per 100 elderly people, 2005/06 and 2006/07



Note: Date is age- and sex-adjusted: Patients with diabetes or congestive heart failure are excluded
Source: Institute for Clinical Evaluative Sciences

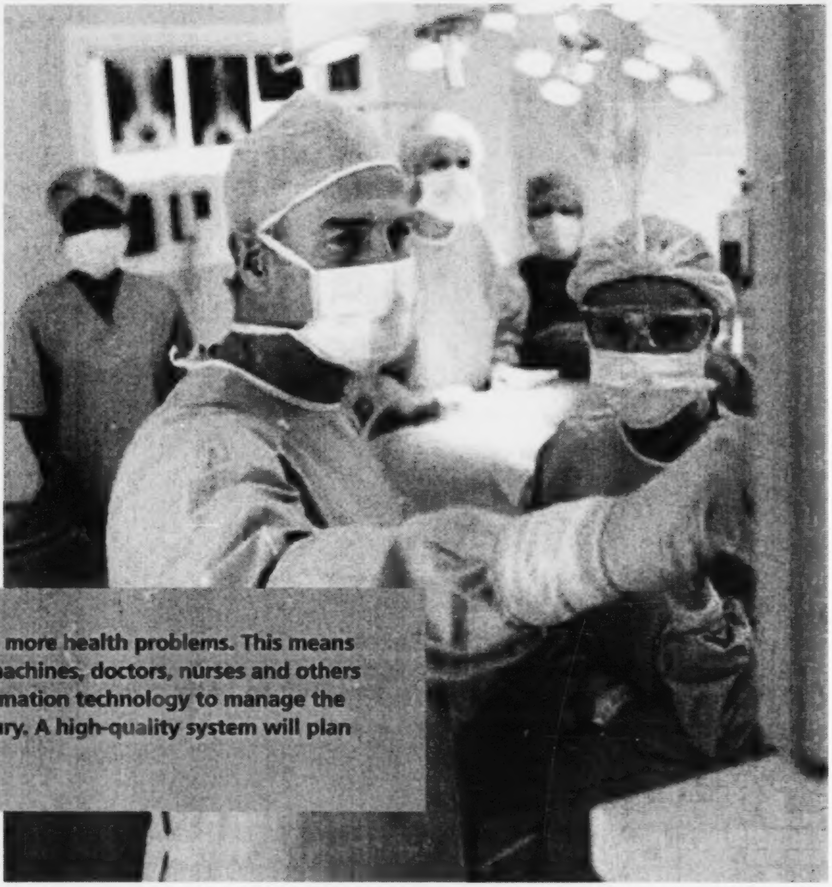
Why is this happening? As we discussed in last year's report,[32] there are too often gaps between the care we know is best for patients, and the care they get. Barriers to best care include practitioners being too busy to learn, poor communication, uncoordinated education and a lack of support for change. In the case of blood pressure drugs, drug companies make better returns from new, expensive drugs than from the old staples that have been around for years and can be copied by "no-name" drug companies. That leads drug companies to market their new products aggressively and overlook the older, cheaper medications, like thiazides, even when they're just as effective.

There is also a range of ways to improve care, including educating patients and co-ordinating messages to physicians with practical strategies for change — such as changing the rules of the drug benefit plan so doctors must prescribe thiazides unless they can give a reason not to. The money the provincial government saves could be spent on other health needs.

What can you do?

If you are being treated for hypertension and aren't taking a thiazide, ask your doctor about it. Unless you also have certain other conditions, such as diabetes, coronary artery disease, chronic renal disease, stroke or heart failure, it may be right for you.

The health-care system should have enough qualified providers, funding, information, equipment, supplies and facilities to look after people's health needs.



For example, as people age they develop more health problems. This means there will be more need for specialized machines, doctors, nurses and others to provide good care. We also need information technology to manage the complex care we deliver in the 21st century. A high-quality system will plan and prepare for this.

2.7 Appropriately resourced

2.7.1 Overview

A high-performing health-care system needs the right amount and mix of resources — including money, people, equipment and information technology. No one's sure how much money is the right amount to spend on health care, or how many professionals we need, or even what equipment we should buy or where to put it — although it's clear we're far behind on information technology. We need solid research to help us make decisions about all those resources, and good plans for how to use them, to get the maximum benefit for the health of Ontarians.

Keeping track of what we spend is one way to keep track of our investment in health. There is a set of national accounts that report how much money is spent on health care, by whom and for what, which make it possible to compare what we in Ontario spend compared to other provinces. We've used those accounts to understand health-care spending patterns in Ontario.

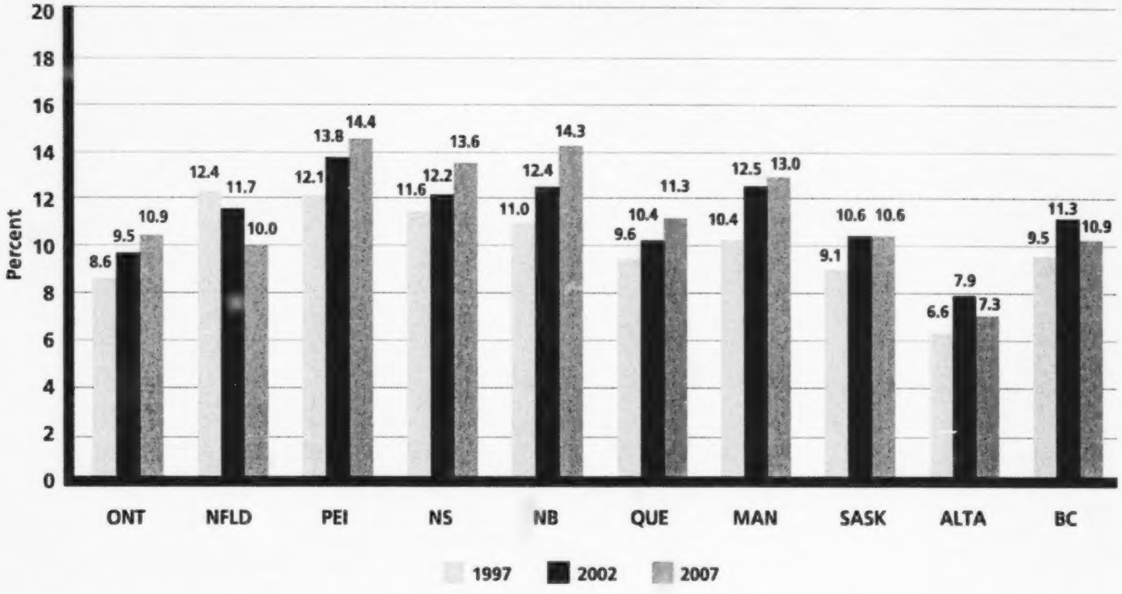
It's a big picture: the provincial government finances hospitals, long-term care, doctors, drug coverage for the elderly and those with special needs, family practice, public health and much more. But along with paying for the operation of the health-care system today, the province also invests in equipment and personnel to provide health care in the future, so as well as looking at spending for care, we're reporting on:

- Training of future health-care providers
- Investment in information management

2.7.2 Health-care spending

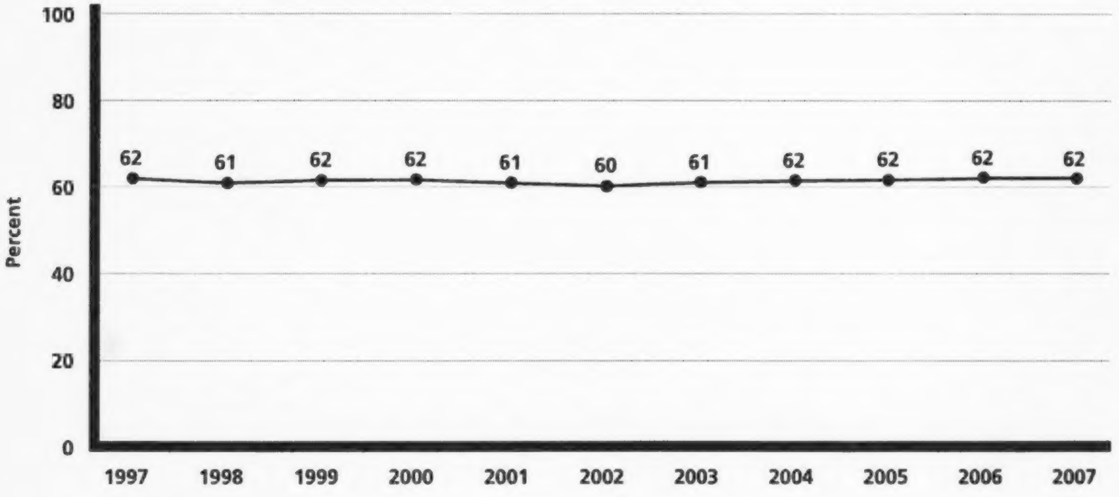
Calculating the straight dollars and cents spent on health care tells us something about cost, but there are many other ways to look at what we're spending. We've used three. The first is what percentage of total wealth is spent on health care. Total wealth is measured by the gross domestic product (GDP) — the value of all the goods and services produced in the country. In our case, we use the gross provincial product to look at what percentage of

Total health expenditure as a percentage of gross domestic product by province, 1997, 2002 and 2007



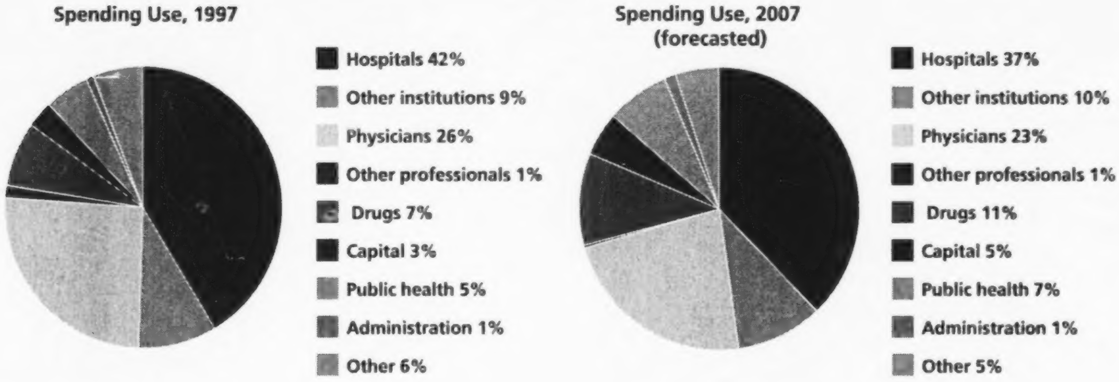
Note: 2007 results are forecasted
Source: Canadian Institute for Health Information, 2007; National Health Expenditure Trends, 1975-2007

Percentage of total health expenditure funded by the Ontario government in 1997 constant dollars, 1997-2007



Note: 2006-2007 results are forecasted
Source: Canadian Institute for Health Information, 2007; National Health Expenditure Trends, 1975-2007

Percentage distribution of Ontario government health spending by use, 1997 and 2007



Note: 2007 results are forecasted
Source: Canadian Institute for Health Information, 2007; National Health Expenditure Trends, 1975-2007

Ontario's total wealth has been spent on health care over time, and compared to other provinces.

Next, we take the total expenditures on health to determine what proportion of those expenditures comes from the provincial government (many things, such as dentistry and medication for most people under 65, are paid for by individuals and insurance companies). Finally, we look at provincial government expenditures to see what types of services the government is buying with taxpayer's money and how that spending has changed over time.

In the fiscal year ending in 2007, the government of Ontario spent $35.7 billion[32] on health care, or $2,778 for each Ontarian.[33] That's about 10.9 percent of the province's total wealth and the result of a steady increase from 8.6 percent in 1997 and 9.5 percent in 2002. Ontario's spending is near the national average. Historically, the eastern provinces have spent more of their wealth on health than Ontario while Alberta has spent less. For the last decade, the provincial government's share of total health-care spending in Ontario has been about 60 to 62 percent.

About 60 cents of every dollar spent on health care comes from the provincial government, which hasn't really changed over the last 10 years. The pie charts that follow show hospitals, physicians and drugs have remained the three largest areas of health-care spending by the province over the last decade. Hospitals still take by far the largest share of expenditures, but their share is dropping, while spending on drugs increases.

That shift is partly because the way we deliver health care has changed. New procedures, like using stents to open up clogged arteries instead of doing coronary artery bypasses, and "keyhole" surgery that is guided by tiny cameras, mean people don't need to spend as long in hospital as before. There's also been a shift in policy, partly based on medical breakthroughs, partly on costs, that has put more care out in the community and into the hands of family — and led to bed and hospital closures. But the change is also driven by the soaring prices of drugs, as we discussed in section 2.6.4, which take more of the provincial budget every year.

The data show an ever-increasing share of Ontario's wealth is going into health care, which leaves less to spend on other things such as education or rebuilding roads and sewers. That's not the case in all provinces, but a closer look at the national statistics shows why. Ontario, Prince Edward Island, Nova Scotia, New Brunswick, Quebec and Manitoba have all increased the proportion of wealth they put into health. Saskatchewan has held the line, and the proportion has fallen in three provinces — Newfoundland, Alberta and British Columbia. That's because all four have rapidly growing economies. They aren't spending less, they're seeing their overall economy grow, so what they do spend on health takes a smaller percent of the total.

What really matters is what we're getting in return for our investment. Does what we spend on health make the people of Ontario healthier than they would be otherwise? Would they be healthier still if we spent more? It's a very complex issue, and society has never done a good job of assessing whether what we're spending on health care is worth it. It would certainly help day-to-day management decisions if we had better information on whether our health-care services were cost-effective. But we do need to think about what level of spending we can afford in the long term.

2.7.3 Investment in training health professionals

We hear a lot about long waits in health care — for appointments and tests and surgery. Many of those delays are caused by the same thing: hospitals, and health care in general, are short-staffed. Installing MRI machines in every hospital won't reduce waits for the service if there are no technicians to run them or radiologists to look at the scans. Despite not knowing exactly which health-care professionals we need more of — a lot of research is being done to help decide that — the province has made a commitment to expand the health-care workforce.

In the November 2007 throne speech, the government pledged to hire 9,000 more nurses and work toward a goal of having 70 percent of nurses work full-time. It also guaranteed new nursing graduates would get jobs and said it would establish 25 more nurse-led clinics. As well, Ontario is increasing places in medical schools and training spots in hospitals for doctors from other countries, who must do a certain amount of work here to get a Canadian medical license. The province also plans to increase the number of nurse practitioners and midwives.

But we don't just need more health-care workers. We also need to re-organize the way they work so all their skills are used fully and efficiently. We need to make careers in health more rewarding so they attract people in the first place, and create healthy and interesting workplaces to keep people on the job.

For this section, we looked at investments in training for various professions and how the supply of doctors and nurse practitioners in primary care has changed over time.

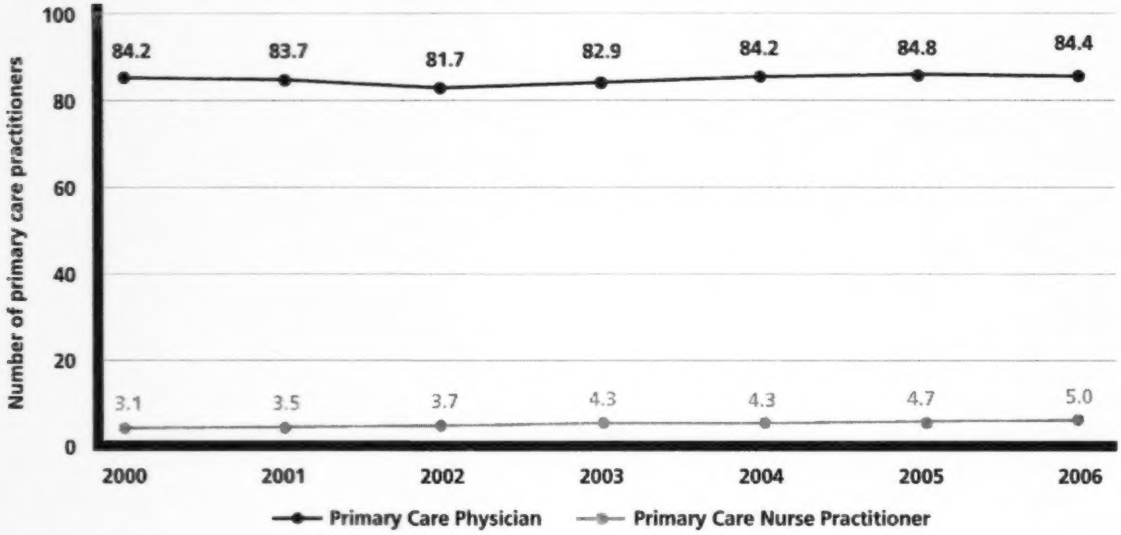
Number of places for first-year students in Ontario, 2005/06 and 2007/08

	2005/06	2007/08	Percent increase
Medical			
Undergraduate medical students	780	826	5.9%
Training and assessment opportunities for internationally trained medical graduates	200	215	7.5%
Nursing			
Registered nurses (RN)	3407	3515*	3.2%
Nurse practitioners (NP)	100	150	50.0%
Other health professionals			
Pharmacists	240	332	38.3%
Midwives	60	80	33.3%

*Note: *data from 2006/07*

Sources: Medical — Physician Planning Unit, HHRPB, Ministry of Health and Long-Term Care, 2007; Registered nurses — Registered Nurses' Association of Ontario, 2006/07; Nurse practitioners — Public Announcement, Ministry of Health and Long-Term Care, 2007; Pharmacists — University of Waterloo and University of Toronto; Midwives — Public Announcement, Ministry of Health and Long-Term Care, 2007

Supply of primary care physicians and primary care nurse practitioners per 100,000 population in Ontario, 2000 to 2006



Source: Ontario Health System Scorecard 2007/08, Ministry of Health and Long-Term Care

There has been continued growth in training positions. This year a new school of pharmacy is opening and nurse practitioner and midwife programs are expanding. The Ministry of Health and Long-Term Care is meeting its commitment to increase the number of training spots, but of course the effects won't be felt for a while, because training health professionals takes time. It's a six-year journey for medical students from admission to entering family practice and it takes eight years or more to qualify as a specialist. Since 2000, the number of primary-care physicians has remained stable at 84 per 100,000 people; meanwhile, the number of nurse practitioners has increased from just over three to five per 100,000 people in Ontario. This slow growth is partly because of how long it takes to be trained, but it's also because only a portion of graduating physicians and nurse practitioners are choosing to work in primary care.

Planning human resources in health care is very complex, because of a range of influences on supply that are difficult to estimate, such as an aging population, changes in how we deliver care, people moving from job to job more than they used to and younger generations wanting to work different hours. Yet changing plans to accommodate these factors takes years, because training is a long process.

Despite these unknowns, we must learn to set long-term goals for the mix and number of health-care workers that we'll need in the future. Without goals, we can't decide on the numbers and types of professionals we should train. But it's equally important to keep the professionals we have now in the workforce and part of that is ensuring health-care workplaces are healthy for the people who work in them. The Ontario Health Quality Council will be working with the Ministry of Health and Long-Term Care over the next year to develop ways to measure and report on health-care work environments.

2.7.4 Use of information technology in acute-care hospitals

We live in the age of information technology. Many teenagers have more computing power on the cell phone in their pocket than an entire business could muster 25 years ago. And yet in health care — which most of us think of as an incubator for science and research — information technology is all too often under-funded, underused and underappreciated. Most family physicians still scribble notes on pieces of paper and cram them into patients' files. Big-city hospitals use fax machines to share test results for severely ill patients. Often, health systems that have adopted

It's about more than just *more*: finding creative ways to meet health needs

Many people think health care's problems could be solved if we just had more people working in the system, but there's much more to it than that. We need to balance the need for services and the supply of health professionals.

Ontario has a number of initiatives underway to do that, including: a marketing and recruitment agency (www.healthforceontario.ca) to attract health professionals; special programs to speed hiring of foreign-trained professionals; new roles for health professionals to use all their skills; and investments to make work environments healthy and safe. In about a year, the ministry is aiming to complete a planning model to help find that better balance between supply and demand.

When supply/demand gaps creates serious problems, creative solutions must be found. That's what happened when emergency department closures became more and more of a problem. These must be staffed with at least one doctor, 24 hours a day. If there's no doctor, emergency shuts down. The problem: where to get more emergency physicians fast?

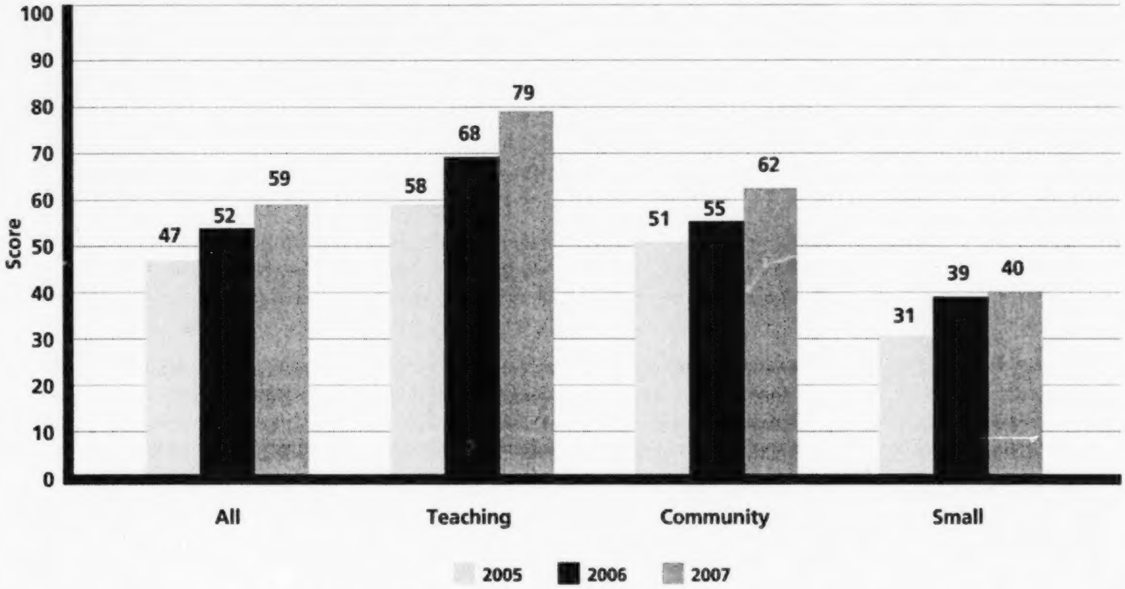
The answer: use what you have more effectively. In October 2006, the government of Ontario announced a $142.4-million Emergency Department Action Plan. One key step was creating a pool of qualified emergency physicians who were available to provide coverage in hospitals that were having trouble covering all the shifts in their emergency departments. The hospitals had to agree to accept a common credential process, so the physicians could work in any of the designated hospitals which need assistance. The government supplied incentives for emergency physicians to work extra shifts on top of their existing commitments.

The plan also set up an early-warning system for potential emergency staff shortages. Starting in October 2007, each of Ontario's local health integration networks appointed an emergency leader to work with hospitals in their area and plan creative ways to solve emergency issues. The health integration network staff monitor hospitals on a weekly basis to make sure the emergency departments are covered and open for the public. Since the plan was put into place, no emergency department has closed for lack of a doctor to work in it.

information technology have done it haphazardly, so different departments in the same organization can't communicate. Tests get lost, monitoring patients is difficult and endless details are allowed to slide between the cracks. It is an impossible situation, and yet it remains.

The fact is, we cannot expect to keep improving health care if we don't improve how we communicate information. Health care in general and hospital care in particular involves collecting and recording enormous amounts of data. But using it effectively is a huge challenge because of our failure to take advantage of modern electronic information systems. Proper use of information technology would improve the quality of the care we give and increase patient safety. So how are we doing with this? Poorly. We have seen some progress in teaching hospitals over the years of this survey but even among these elite hospitals there is still a long way to go. The implementation of information systems in small hospitals has stalled in recent years.

Score of selected Ontario acute-care hospitals on their use of information technology by type of hospital, 2005 to 2007



Source: Hospital Report Research Collaborative. Hospital Report 2005: Acute Care System Integration and Change Technical Summary; Hospital Report 2006: Acute Care System Integration and Change Technical Summary; Hospital Report 2007: Acute Care System Integration and Change Technical Summary

We used self-reported surveys from hospitals, collected as part of Ontario's Hospital Report, to assess use of electronic information systems across a range of different hospital services, including laboratories, diagnostic imaging and medical records. The report asked participants to rate themselves on a scale from zero to 100, where zero meant they had no electronic information systems and 100 meant they had fully functional systems in all the areas assessed.

A small number of hospitals in Ontario have done well in developing complete electronic information systems — but they're the exception, not the rule. Even some of the biggest hospitals are not using modern information systems effectively to improve the care they provide. Every year we delay introducing IT systems means more health professionals are being trained without information technology being an essential part of the care they give. That will drag the problem out into the future and make transforming health care's use of IT all the more difficult. The graph shows small hospitals — the backbone of care in many communities — are lagging far behind larger hospitals in developing information systems. This could mean patients in those communities don't have access to the best care available.

It would be useful to have clear goals for providing care using IT. But it's important to remember better communication isn't needed just within individual institutions but also across the health-care system. We don't even have the information to evaluate the state of information technology in community-based care. But even without it, we can't ignore the fact that our failure to put information technologies to work for health care is ultimately a threat to quality of care and patient safety.

2.7.5 Investment in information management

As important as information technology is, it's just one part of "e-health" — the generic term for the technology and systems required to capture, store, retrieve, share and manage health information. All that information is only as good as our ability to sort it, store it, draw on it and interpret it when we need to — activities known collectively as information management.

Information management is a priority for the Ministry of Health and Long-Term Care. It's developed a new division responsible for developing and managing information for

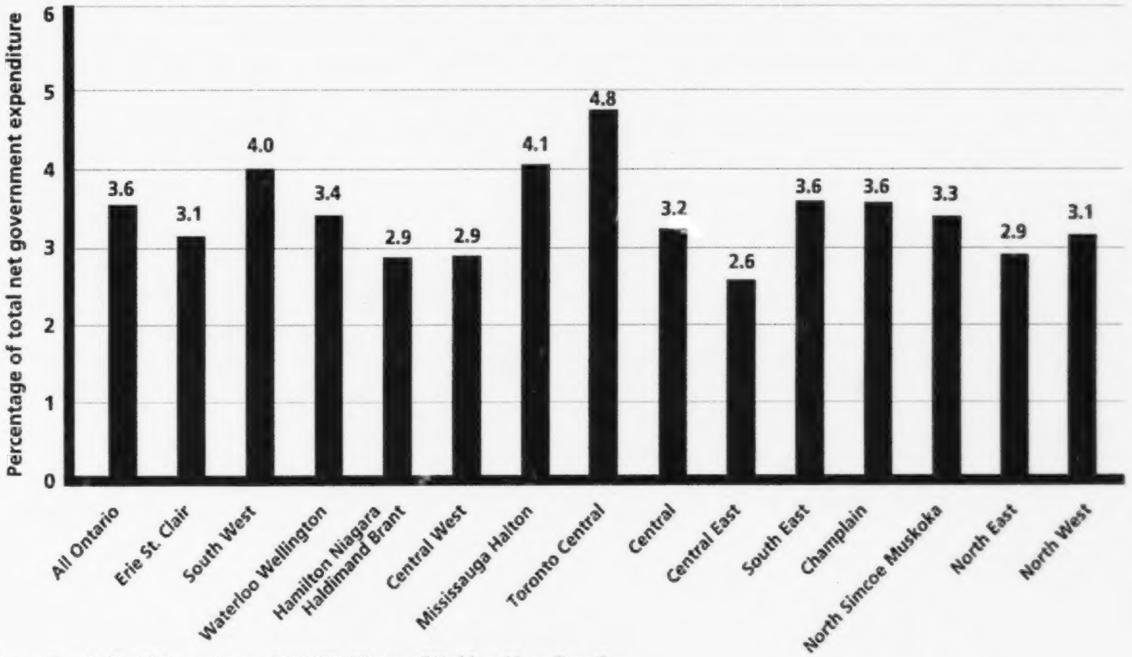
An intelligent approach to information technology

E-health is the generic term for the use of information and communication technology required to capture, store, retrieve, share, analyze, and manage health information. It's seen as crucial to operating a high-performing health system, but we are not doing a very good job of it in Ontario. The highest average hospital scores for adopting e-health, according to a 2007 survey from the Ontario Hospital Association, are the hospitals of the Erie St. Clair Local Health Integration Network in southwestern Ontario — Bluewater Health in Sarnia, Chatham-Kent Health Alliance, Leamington District Memorial Hospital, Hotel Dieu Grace Hospital and Windsor Regional Hospital in Windsor. Progressive thinking about e-health began in the area as early as 1999, at the Chatham-Kent Health Alliance. From the outset, plans for e-health included all the organizations in the region. This "one system for all" philosophy has meant the Erie St. Clair network could share each organization's best ideas for e-health with the rest, while ensuring patients benefited from smooth communication among common systems.

Doctors in the region are so accustomed to the technology and using e-health in their practices, they keep asking for more tools to enhance quality and efficiency, such as computerized entry for their orders for patients.

Erie St. Clair has established a single service provider for e-health across the health network, and because they negotiate software and systems with the whole group in mind they save money when new systems are ordered. Where some health organizations may be wary of surrendering a control over their IT decisions, the experience in Erie St. Clair shows the benefits of extensive, early regional planning and collaboration, of getting support from officials in every organization and, above all, of co-operation.

Information systems and communications spending as a percentage of total net Ontario government health-care spending, by local health integration network, 2006/07[II]



Source: Ontario Health System Scorecard 2007/08; Ministry of Health and Long-Term Care

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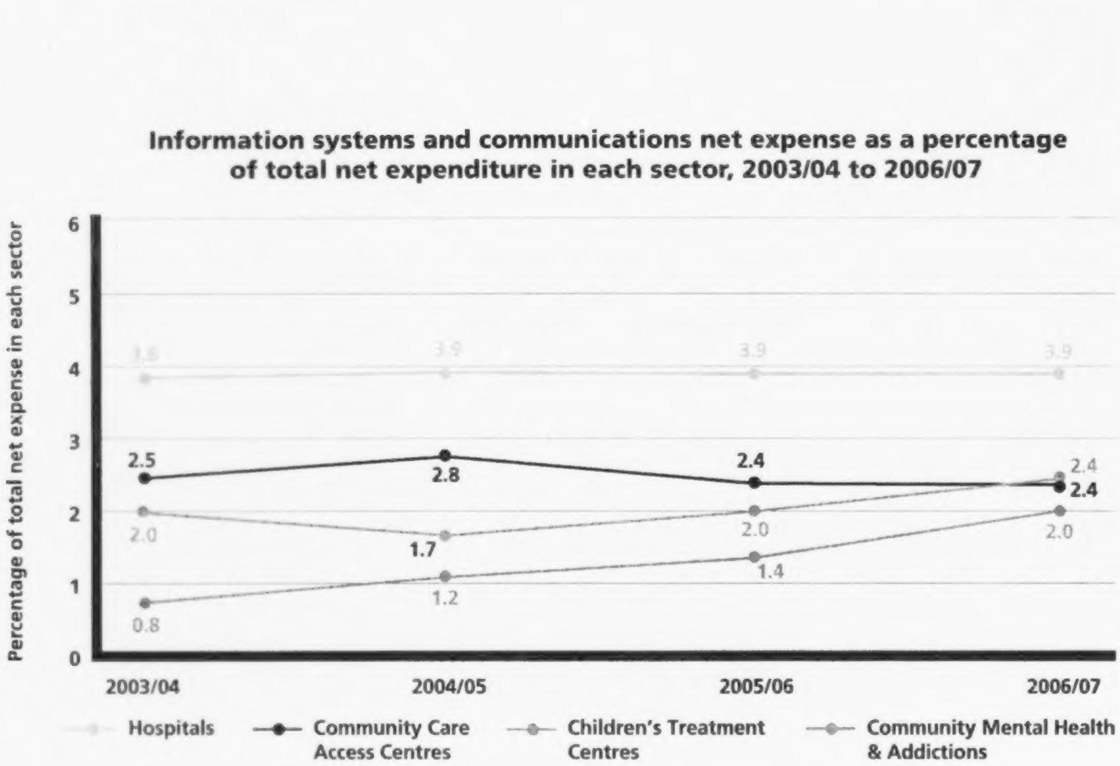
[II] This includes hospitals, children's treatment centres, community care access centres and community mental health and addictions centres only.

Information systems and communications net expense as a percentage of total net expenditure in each sector, 2003/04 to 2006/07



Source: Ontario Health System Scorecard 2007/08; Ministry of Health and Long-Term Care

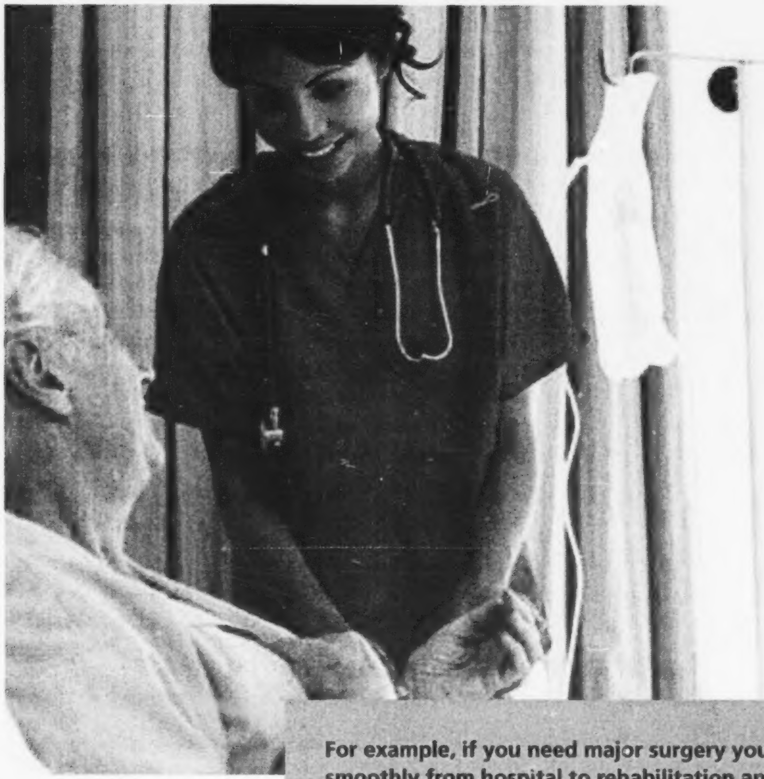
health-system planning. Hospitals and community health-care providers are also trying to move in this direction. That's in keeping with the 2007 Ontario Liberal Party platform promise to "create an electronic health record by 2015 and give Ontarians control over the information contained in it." In 2007/08, the Ontario government is providing an additional $64 million to promote e-health.

But, as with information technology, spending and emphasis on information management is inconsistent from one organization to another, and even within them. The province promotes the use of information management, but a report released by the Ontario Hospital Association earlier this year says "the current funding environment does not effectively support the adoption, collaboration and integration necessary to enable the realization of e-Health's true value." The report calls for multi-year operating funding, money to buy equipment and software and support to integrate different systems and encourage innovation.

We don't have good data on what is being spent, or how. Lacking that data, we looked at spending on information technology and communications to get at least some sense of how committed we are in Ontario to improving health care through better use of information. We measured the amount of spending on information systems in Ontario as a percentage of total net spending in hospitals, community care access centres, children's treatment centres and community mental health and addiction organizations.

We found there's no pattern of investing in information and its management in Ontario. Spending on it is not increasing, either at the level of local health integration networks or by sector — it was just 3.6 percent of health spending for all of Ontario in 2006/07. That's not much of a change since our report last year, when spending sat at 3.5 percent for each of the three previous years. We pointed out then that this compares poorly to another information-intensive industry, financial services, which at that time was investing 6.6 percent of its revenue in information technology and management.

It is still unimpressive. While we don't know how much investing in information management improves care and what the target for spending on it should be, it's clear we should be trying harder to find out and to make those investments. More research will help us understand where to spend wisely on information management to ensure Ontario's health system is giving high-quality care.



All parts of the system should be organized, connected and work with one another to provide high-quality care.

For example, if you need major surgery your care should be managed so that you move smoothly from hospital to rehabilitation and into care you need after you go home.

2.8 Integrated

2.8.1 Overview

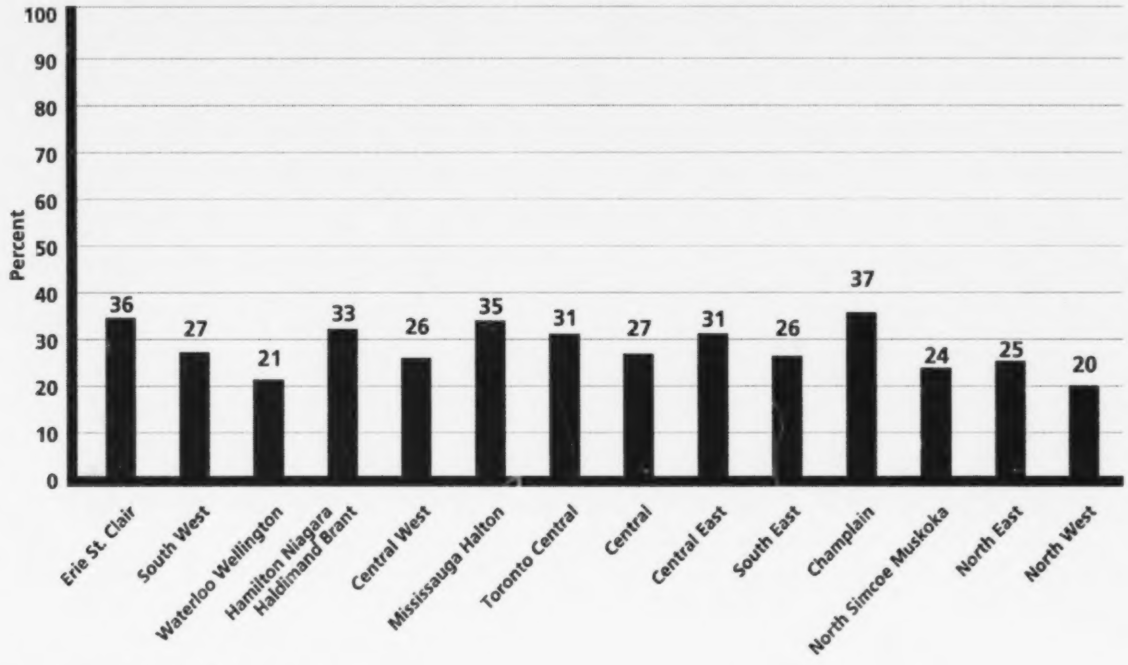
A high-performing health-care system must have effective connections among all its parts, so patients can move smoothly from one service to another. Patients today often have several complex problems and need several types of treatment, mixing occasional need for immediate action with careful management over years. If different services and sectors aren't linked, serious issues can be missed, and aspects of care may fall through the cracks. As we've just been saying, information technology is crucial to integrated care, but a commitment to a similar philosophy and style of care are also important. The pathways patients use to travel through the system are focal points for improving integration and quality of care.

Nine of the 10 provincial health-care systems in Canada have created health regions that oversee several health-care sectors at once — so there is a common administration overseeing hospitals, long-term care and home care, for example. Ontario recently moved in that direction by creating 14 local health integration networks. Regional health systems and Ontario's local networks are intended to improve the integration of care, building relationships among different sectors, better flow of information, co-ordinated planning and patient management. With central administrative oversight, resources can be put where they're needed, not where they have historically been held.

There are many ways to assess how well care is integrated. Cancer Care Ontario is surveying providers to measure if cancer care services are well-integrated. It's too early to interpret the results, but over the next year, we'll be working with Cancer Care Ontario, The Change Foundation and local health integration networks, looking at this survey and thinking about other possible approaches to measure integration in Ontario. We'll be looking for the best way to measure the success of the local health integration network efforts. For this year's report, we've looked at two aspects of integration of care:

- Use of rehabilitation services by people who are treated in hospital for stroke
- Patients' knowledge of whom to contact after discharge from hospital or an emergency department

Percentage of Ontario stroke patients discharged from acute care to inpatient rehabilitation, by local health integration network, 2005/06



Source: Institute for Clinical Evaluative Sciences

2.8.2 Proportion of patients with strokes who get rehabilitation services

Strokes can cause weakness on one side of the body, impair speech and affect brain functions such as planning and managing tasks. Getting rehabilitation quickly after a stroke can help victims rebuild those abilities. High-quality stroke care moves patients smoothly from treatment in hospital to rehabilitation. It takes strong links between care settings to do that. We used data from Ontario hospitals to identify patients who had strokes, then followed up to see if they moved from acute care directly to a regional rehabilitation centre. Unfortunately, not many did. In Ontario in 2005/06, fewer than 30 percent of patients moved to rehabilitation. In some local health integration networks, the rates were above 35 percent, but in others they were closer to 20 percent.

The Ontario Stroke Strategy's goal is that 60 percent of stroke patients should move directly to rehabilitation from acute care (the goal is not 100 percent because not everyone needs rehab, and others wouldn't benefit from it). The variation across the local health integration networks may be caused by different approaches to managing stroke care or different levels of integration.

We can use these results in the future as a baseline to evaluate how well the local health integration networks are doing integrating care. Meanwhile, we're hoping the Ontario Stroke Strategy has success with its efforts to boost rehabilitation services with programs in the community and in long-term care centres. However, we still need to know more about which patients are getting rehabilitation, which aren't, and why.

2.8.3 Patients' knowledge of whom to contact after discharge from emergency or acute care

We tend to focus on the difficulties of getting into hospital and the quality of care when you're there, but what happens when you leave is also important. Some people leave a hospital or the emergency department "cured," with their health problem solved. But most people require at least some follow-up care once they're back in the community and in many cases, continued treatment and

The Ontario Stroke Strategy — minimum damage, maximum recovery

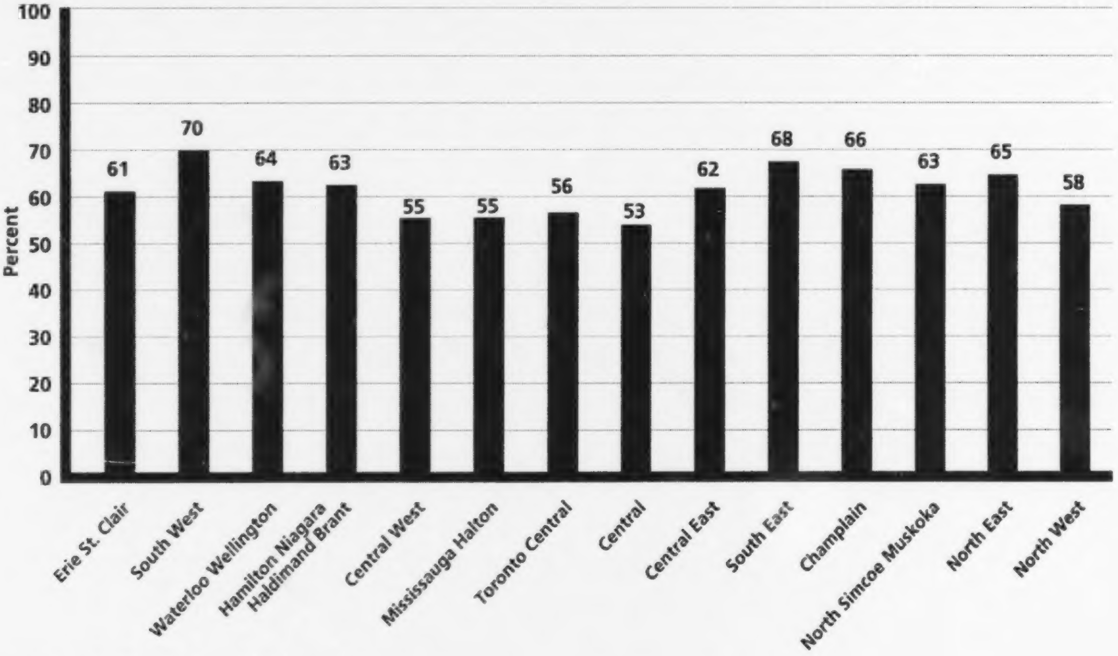
Strokes were once thought of as a result of aging for which little could be done. But research tells us that rapid treatment when they hit and prompt rehabilitation afterwards can make a huge difference to how well stroke patients recover.[36] To give patients maximum benefits, however, it's crucial that all the services involved work well together. The Ontario Stroke Strategy was developed to make that happen.

The stroke strategy says stroke care must link services from prevention to post-stroke care, so they operate as a unified whole, based on the best evidence of what works and the highest standards for treatment. It emphasizes rehabilitation, whether in specialized rehabilitation hospitals, as part of the care in acute-care hospitals or through outpatient programs.

In 2006, researchers studied the effectiveness of the stroke strategy.[37] They found it had improved integration and co-ordination of stroke care, treatment for stroke, and client and provider satisfaction. Ontario's 11 regional stroke centres say their official designation helps to attract and keep neurosurgeons and neurologists. The Telestroke videoconferencing system lets those experts assist medical staff in hospitals that don't have neurologists.

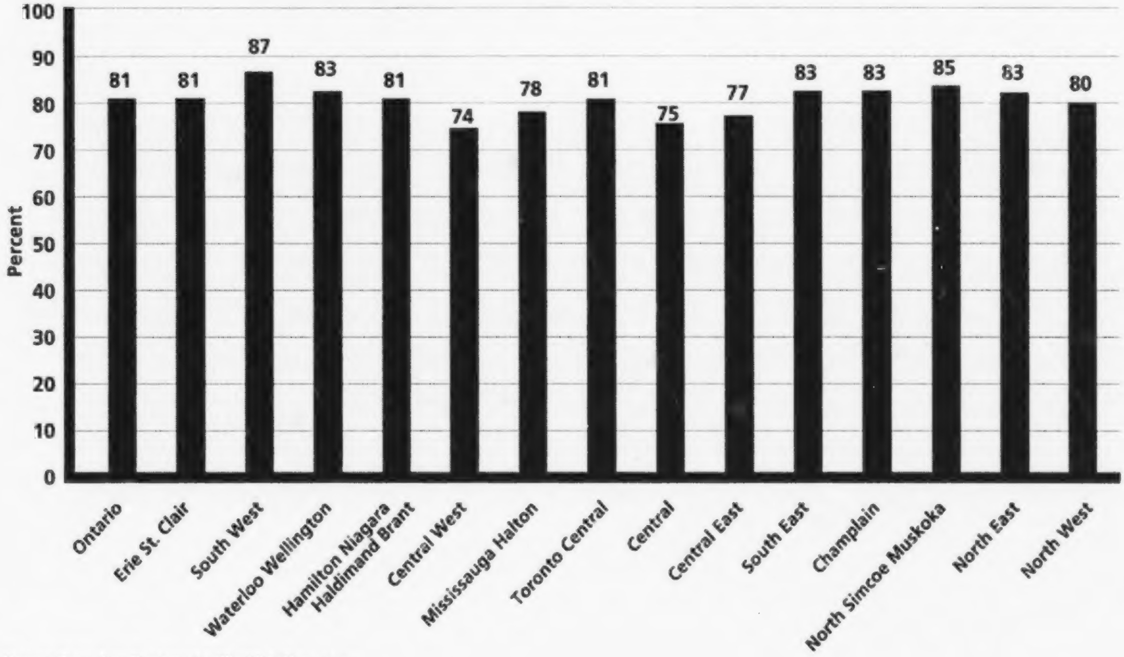
However, the study also found several weak links in stroke care, including how quickly providers adopt new advances in care, how fast emergency departments respond to stroke and the transition of stroke survivors from hospital back to the community.

Percentage of Ontario patients leaving emergency who knew whom to contact if they needed care or had questions, by local health integration network, 2005/06



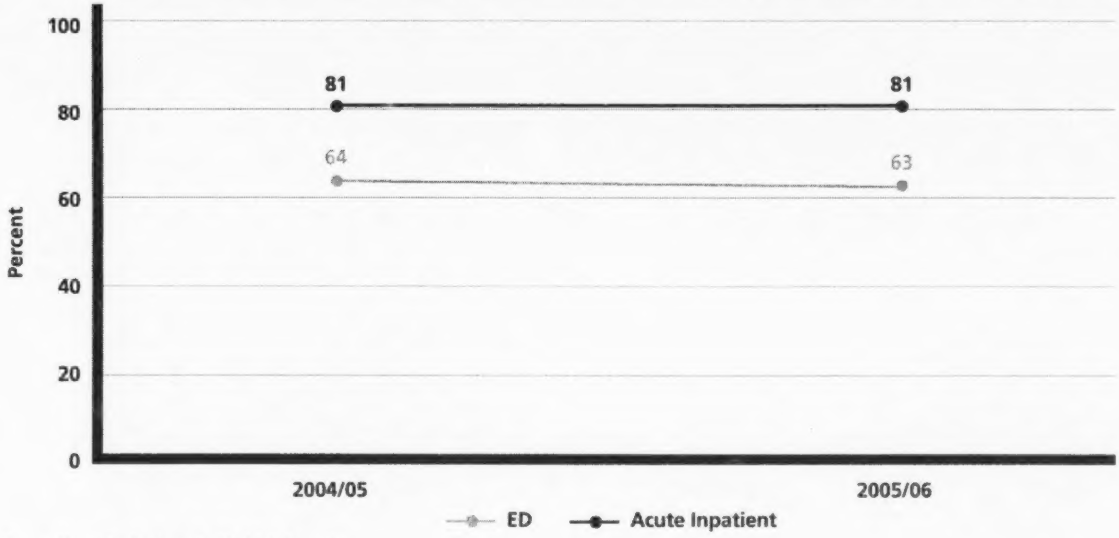
Source: Canadian Institute for Health Information

Percentage of Ontario inpatients leaving acute inpatient care who knew whom to contact if they needed care or had questions, by local health integration network, 2005/06



Source: Canadian Institute for Health Information

Percentage of Ontario patients leaving emergency or acute inpatient care who knew whom to contact if they needed care or had questions, 2004/05 to 2005/06



Source: Canadian Institute for Health Information extensive support. All patients should know whom to call for problems or follow-up care when they're released, so they don't fall through the cracks and the health-care system can provide co-ordinated care.

Once again we used information from the Canadian Institute for Health Information, in this case patient experience surveys. Patients were asked whether they were told whom to contact if they needed help or had questions when they were sent home from hospital or emergency. About four out of five patients leaving hospital knew whom to contact if they had questions or needed care. The rate was lower, about three out of five, for those leaving emergency departments. There was some variation across local health integration networks in the proportion of patients who knew whom to get in touch with, but nowhere had a rate above 87 percent for hospital cases or above 70 percent for people leaving emergency.

Most, though not all, patients know what to do if they have questions or concerns related to their recent hospital visit. This is important because patients feel more confident and satisfied with their care if they are kept informed. However, we don't know how many of them actually tried to reach a provider for more care and information, whether they succeeded, and how long they had to wait for either care or answers, all of which would tell us much more about how we're doing at integrating care.

Home at last — with help to stay there

When older people leave hospital, they're usually feeling pretty frail and vulnerable. Caring for themselves may seem overwhelming. Home at Last! is a program designed to help seniors living alone or with an older caregiver to get home, settled, and supported after a hospital stay.

The program began in the Central West, Waterloo Wellington and Mississauga local health integration networks to smooth the transition from hospital to home. All the hospitals involved have re-organized their discharge processes, so patients leave at a scheduled time, transportation home is ready, and there's a worker waiting to help the patient settle in. The workers pick up prescriptions and basic groceries and stay with the patient until 9 p.m. or a family caregiver arrives.

The next day, the Home at Last! care co-ordinator follows up with the patient and family to arrange for community services and supports needed to let the patient get well at home — things like delivering supplies and providing transportation to appointments — the kinds of things that keep people from winding up back in hospital.

Evaluation of the program is underway, but organizers have found a few problems. They didn't do enough to let patients and community services know the program was available and they've found involving everyone in planning would have been a good idea. They'd like to extend the service to provide follow-up longer during recovery. Other local integrated health networks are looking at the program.

2.9 Focused on population health

2.9.1 Overview

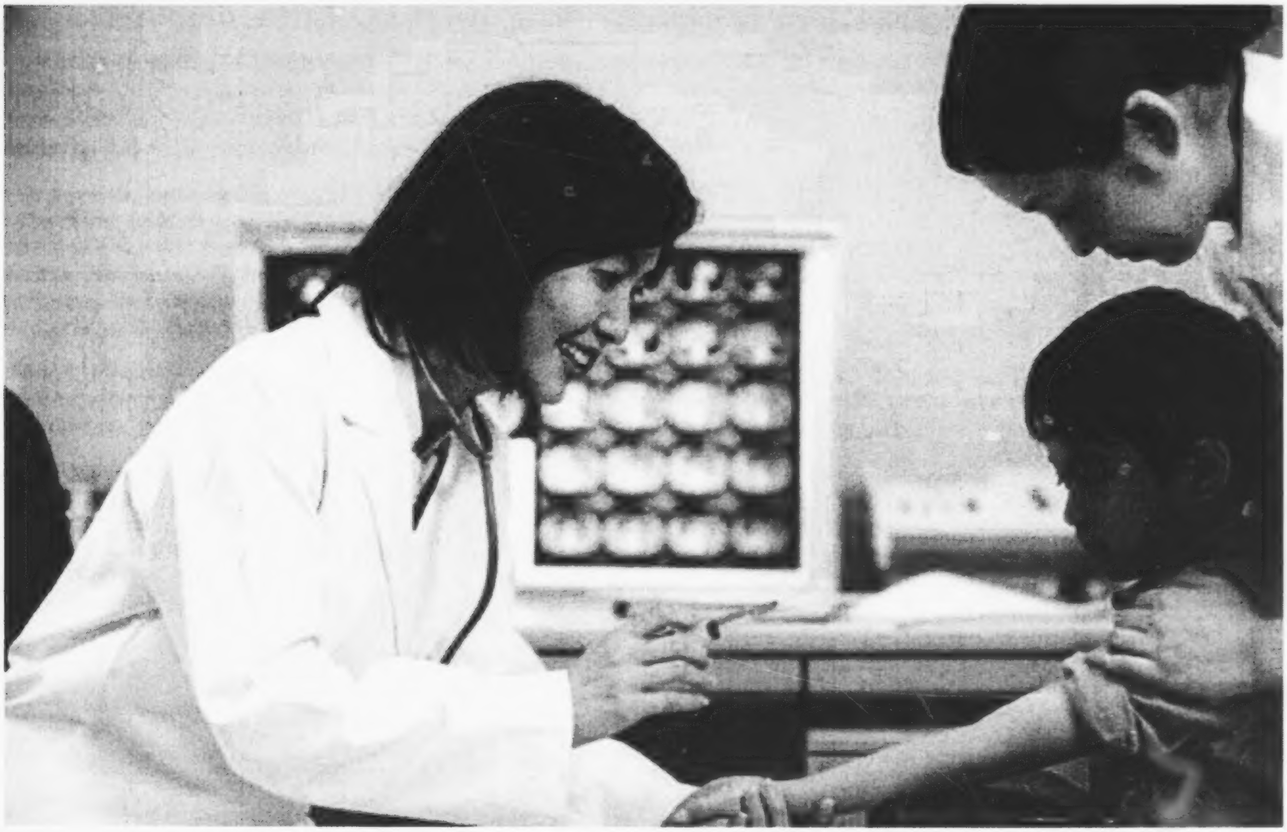
A high-performing health-care system should do more than simply care for us when we're sick. It should also prevent illness and keep us as healthy as possible. This is done through public health programs — activities aimed at large parts of society, not just individuals.

Vaccination against infectious diseases is an example. Its great strength is that when enough individuals are vaccinated, disease has trouble spreading and all of society, even those who did not get the vaccine, benefit.

Another approach is to use programs or policies to change risky health behaviour in the population, such as smoking, poor diet and lack of exercise. Such behaviour can lead to chronic diseases ranging from diabetes and heart disease to cancer. Often, the best effects come when multiple strategies are combined. Getting people to stop smoking may begin with a doctor telling a patient of dangers of tobacco, but the chances of quitting are greatly increased by cigarette taxes and bans on smoking in public.

Screening programs are a third approach. Screening identifies people in the early stages of diseases such as cancer, so they can be treated promptly before the disease leads to disability or death.

The health system should work to prevent sickness and improve the health of the people of Ontario.



Many of the factors that prevent disease and improve health go beyond what the health-care system alone can do. Things like a secure childhood, an education, wealth or poverty, a circle of social support and adequate housing and food play a key role in creating healthy individuals and communities. These "social determinants" of health are usually not seen as responsibilities of the health-care system. Other government ministries are responsible for issues such as social housing, education and employment. However, the health-care system can play a role to ensure that people at high risk get the right preventive health services. Welfare workers, for example, might urge people to have screening tests for diseases, or refer them to mental health programs or even to a clinic to quit smoking or deal with other addictions. A drop-in centre for single moms or immigrants could offer nutrition counselling and referrals for other types of care.

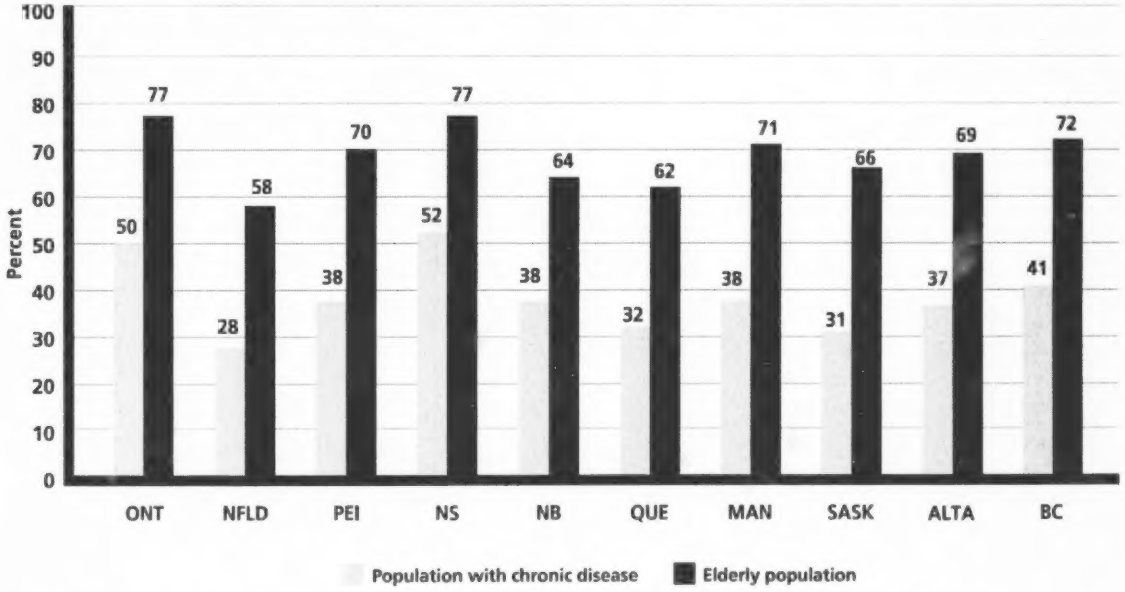
2.9.2 Vaccination programs

Flu is more than just a few days discomfort and an inconvenience. For people with chronic diseases and the elderly, flu can be life-threatening. We know from research the flu vaccine can reduce the amount of severe illness and number of deaths that flu causes in seniors and the chronically ill. That's why Ontario launched its universal flu vaccination program and makes vaccinating the elderly and people with chronic conditions a priority.

How well is it working? Because it's a relatively new program, it's a little hard to be sure. With long-standing vaccination programs, like those for whooping cough and polio, cases of the conditions are rare, easy to identify and always reported, so we know if the programs are working. The low rates of diseases such as mumps and measles show how effective our childhood vaccination programs are. Flu isn't always properly diagnosed and reported, however, so we looked at the proportion of people who are vaccinated, based on self-reported vaccination rates from surveys, and compared them to numbers from across the country. They show Ontario has a record very similar to Nova Scotia for vaccinating the elderly and people with chronic diseases, and both provinces do better than other parts of Canada.

The data on the flu vaccination program is reassuring. It shows high-risk Ontarians are getting vaccinated at rates

Percentage of the elderly population and the population with a chronic disease who got a flu vaccination, by province, 2005



Source: Kwong JC, Rosella LC & Johansen H. Trends in influenza vaccination in Canada, 1996/1997 to 2005. Statistics Canada Health Reports. November 2007; 18 (4).

that are as high or higher than in other parts of Canada. Still, there's lots of room for improvement, especially among people with chronic disease. Also, because the flu virus changes every year and the vaccine has to keep up with that, its effectiveness can be hard to judge. That means just the rates don't tell us enough. We also have to look at illness and death in high-risk populations during flu season to judge the program's success.

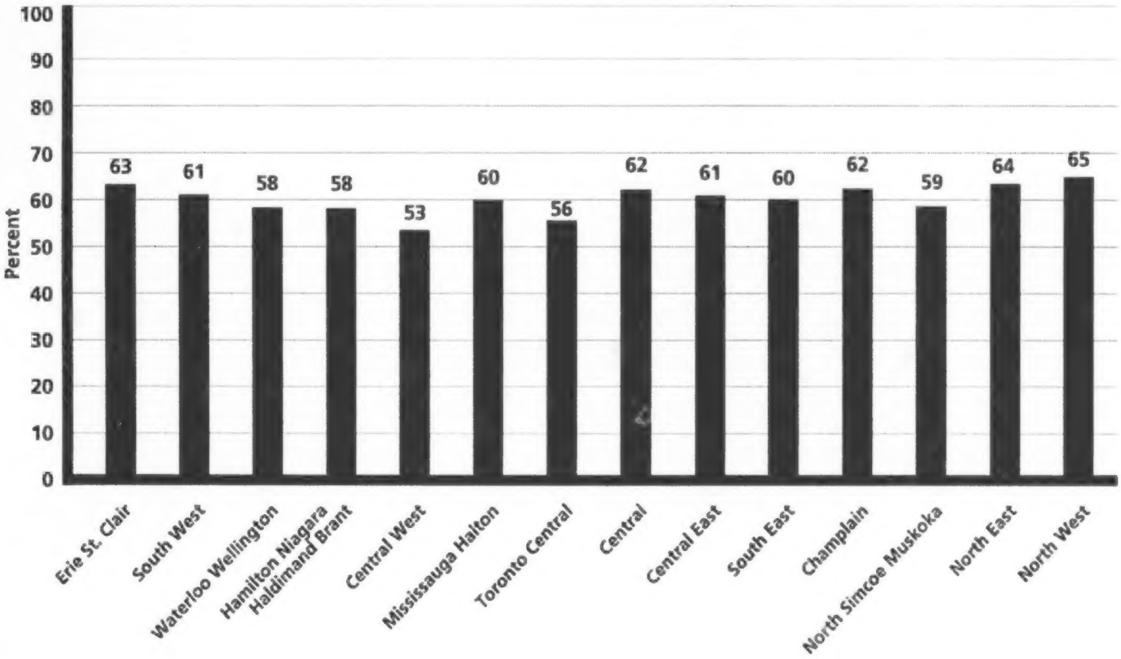
What can you do?

If you're a senior or have a chronic disease, make sure you get a flu shot. You'll find more information at www.gettheflushot.ca.

2.9.3 Screening programs

Screening for cancer lets us detect the disease early, which increases the chance of survival. Ontario guidelines recommend that women 50 to 69 years old get mammograms (breast X-rays) every two years to help detect breast cancer early and reduce deaths. Fecal occult blood tests screen for colon cancers in both sexes. If they show blood in the stool, they're followed up with a test called colonoscopy for diagnosis. Ontario has had an organized mammography program since 1990, and launched its colon cancer screening program in 2007. Both programs are key to the province's efforts to reduce premature deaths from cancer.

For our information on mammography in women aged 50 to 69 and fecal occult blood tests in all people from 50 to 74, we used data from claims submitted to the government, and population data to look at trends and variation in rates of both tests across local health integration networks.



Percentage of eligible women (aged 50 to 69) who had a mammogram in 2004/05

Source: Cancer System Quality Index; Cancer Care Ontario, 2007

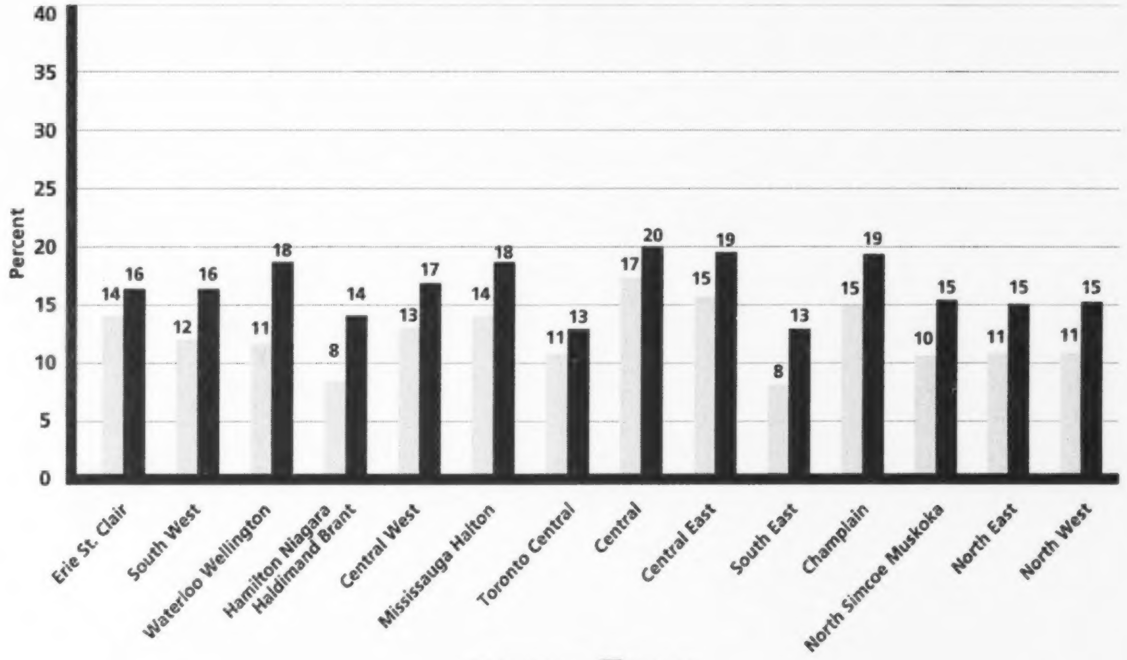
We found that in the past two years, 60 percent of women in the target age group had a mammogram, with some variation across the local health integration networks, from a low of 53 percent to a high of 65 percent.

Available data on fecal occult blood testing shows about 13 percent of the target group (people between 50 and 74) were tested in 2002/03 and 17 percent in 2004/05. Two years of data are not really enough to show an increase, but it's interesting that rates went up in all 14 local health integration networks. Still, there is considerable variation in rates across the regions, from a low of about eight percent to a high of close to 20 percent.

Considering how important they are in helping to reduce suffering and death, it is discouraging these two important screening tests are not more widely used. More than a decade after the co-ordinated program started, only about three out of every five women between 50 and 69 years old had a mammogram. Current mammography services are having an even greater challenge reaching new Canadians, women living in poverty, women without a regular doctor and Aboriginal Ontarians. There's some regional variation, but even best rate was only 65 percent. That's substantially lower than the provincial target of 90 to 95 percent by 2020 and much lower than other countries are achieving now. Between 1997 and 2002, 88 percent of eligible women in Finland were screened, and 76 percent in Britain. Australia's rate was lower than ours, at 57 percent. Cancer Care Ontario has set a short-term goal to increase the rate by 10 percent in the next three years.

The fecal occult blood screening program is a much newer priority. The baseline data show there's a long way to go before we reach the goal of screening a substantial proportion of the population. Even in the highest rate region, the proportion is only about 20 percent and again, we're not doing as well as other countries. The rate in Finland

Percentage of eligible people (aged 50 to 74) receiving at lease one fecal occult blood test within the previous two years, in 2002/03 and 2004/05



Source: Cancer System Quality Index; Cancer Care Ontario, 2007

Cancer Care Ontario — setting targets and hoping for a bull's eye

Health organizations set targets because quality improvement programs work best that way — having a goal and measuring progress toward it keeps people focused on what needs to be done to succeed in making changes.

Cancer Care Ontario (CCO) is responsible for continually improving cancer services so that fewer people get cancer and patients receive better care. It has set long-term goals for screening three types of cancer, breast, colon and cervical — to get 90 to 95 percent of the target populations for those tests having them by 2020. To check progress, they have interim three-year goals — increase breast screening by 10 percent to 70 percent, increase colorectal screening by 23 percent to 40 percent and increase cervical cancer screening by 15 percent to 85 percent. CCO and its partner, the Cancer Quality Council of Ontario track progress toward its targets and post the results on the CCO/Quality Council website at www.cancercare.on.ca/qualityindex2007.

CCO has proposed a plan to the Ministry of Health and Long-Term Care to reach the 2020 targets. It includes getting enough funding to pay for the tests; working with regional leaders to strengthen screening across the province and encouraging primary-care providers to increase screening rates by giving them targets and offering financial incentives for meeting them. It also calls for more public education, building an effective IT structure to support the features of an organized provincial screening initiative (such as reminders to patients to get screened and prompts for follow-up care). The plan says there's a need for more effective data collection to help CCO keep track of what's working and what areas need more help to achieve goals and to permit interventions aimed at reaching specific hard-to-reach groups. The ministry of health is to provide the funding CCO needs to implement the plan.

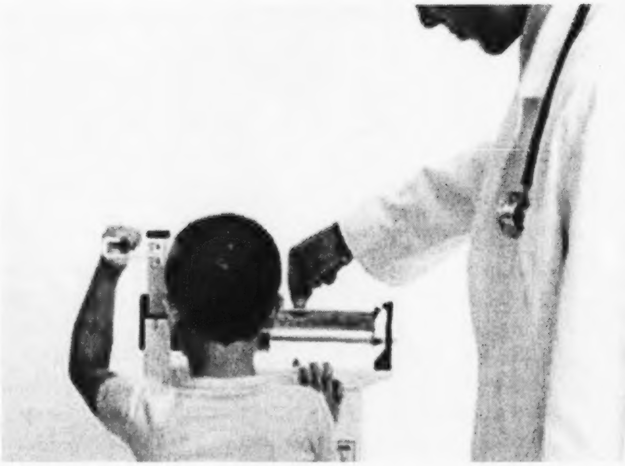
What can you do?

Ask your doctor about getting screened for cancer if you're in one of the target groups. Visit www.ColonCancerCheck.ca

is 70 percent, and in Australia, 45 percent. In the United States, the Veterans Administration health system screened 75 percent of its members for colon cancer, mostly with fecal blood tests.

Cancer Care Ontario's goal for fecal blood screening is 90 to 95 percent by 2020 and its interim goal is 40 percent in three years. Rates will have to speed up a lot if we're going to reach that target. However, some people skip fecal blood screening and have a colonoscopy instead, so the rate of people being screened for colon cancer may be higher than it looks.

We'd like to know why mammography rates are sticking around 60 percent. Do patients not want to go, or are they not being offered the test? Either possibility suggests we need better education for patients and physicians. Fecal occult blood testing is the first step in a new screening program that has just become a priority so we hope the rates increase. It's important, however, that a positive screen is followed up by colonoscopy. As fecal blood screening increases, it will be important to track whether patients are going on to colonoscopy and how acceptable the two procedures are to the public.



2.9.4 Risk factors

Although many things we do in life are bad for us, we focus on two factors that increase the risk of disease: diet and smoking. Diet is the more complicated issue of the two. Food, of course, is essential to live. But too little food, the wrong kinds, or too much can all contribute to poor health.

Using national survey data, we looked at diet three ways. The first is food security, or whether people think they have enough food to eat. We wanted to know to what extent poor people, even in a province as rich as Ontario, are hungry or worried about not having enough food for their families.

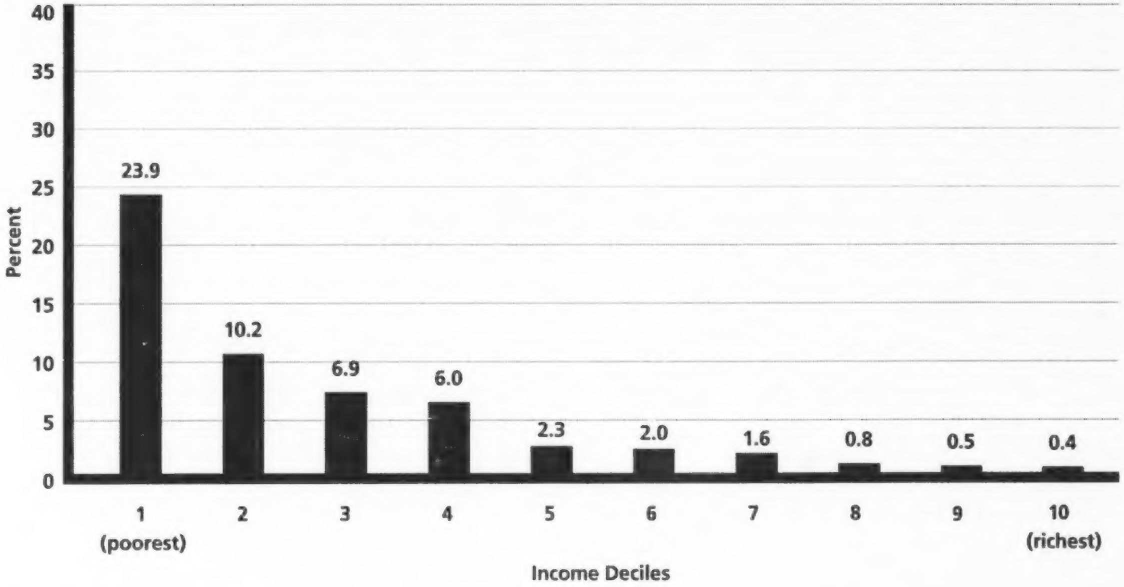
Second, we looked at whether people are eating the right amounts of fruit and vegetables. Studies have observed that higher fruit and vegetable consumption is associated with lower rates of cancer[39] and heart disease.[40]

Third, we examined obesity and smoking rates, not in the general population as we did last year, but just in people with heart disease or diabetes. Both smoking and obesity can put these patients at risk for complications of their diseases and early death.

The survey data show that almost one in four Ontario residents living in the lowest-income neighbourhoods worry about getting enough food every day or being hungry. In the next lowest income group, one in 10 people have food-security concerns.

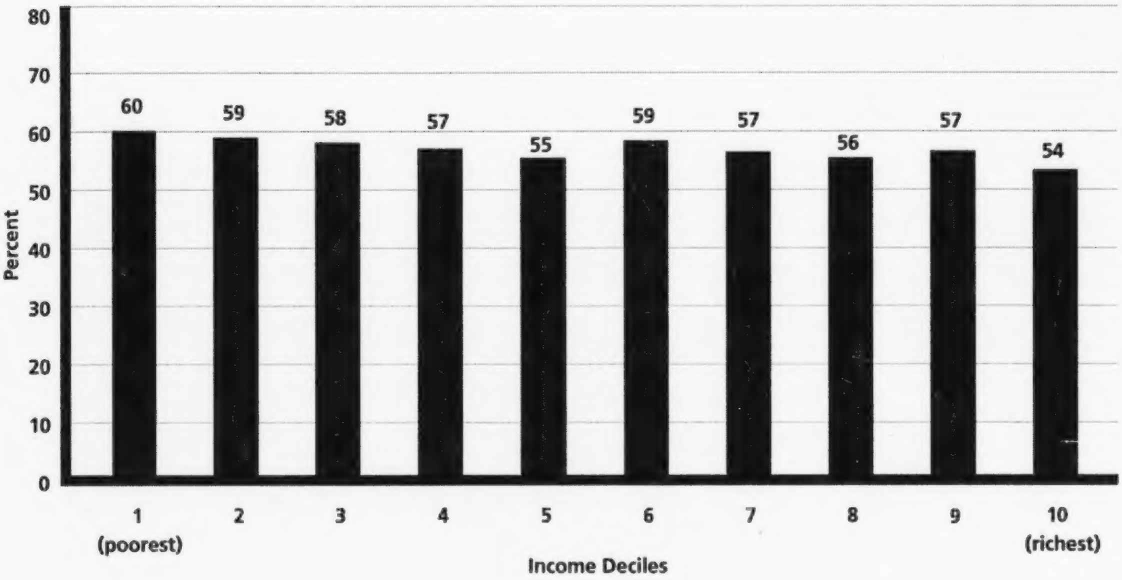
Having more money may take away fear of going hungry, but it's no guarantee you'll eat properly. Six out of 10 people say their diet does not contain the recommended number of servings of fruit and vegetables, no matter what their income. So the very poorest people have a hard time getting enough food, but when they do, they're as likely as wealthier people to eat according to recommended guidelines.

Percentage of Ontarians experiencing food insecurity, by income deciles, 2005



Source: Canadian Community Health Survey, 2005

Percentage of Ontarians, who report not eating enough fruit and vegetables, by income deciles, 2005



Source: Canadian Community Health Survey, 2005

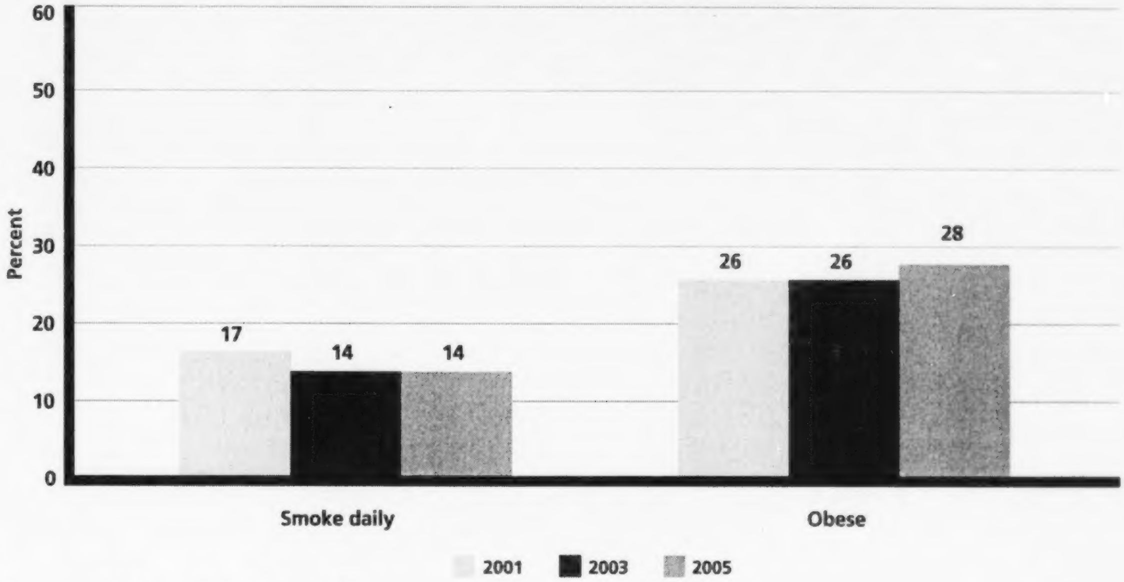
Getting good food to the people who need it most

The Barrie Community Health Centre is encouraging people to eat more fruit and vegetables through its Good Food Box program. Anyone in the community can use the program to purchase a box of fresh vegetables and fruit every month at any one of five places in Barrie and seniors who lack accessible transportation can have the fresh fruits and vegetables delivered. The program encourages teen parents, adults with marginal income and the chronically under-employed to participate in purchasing a box. Further, the Good Food Box program partners with local employment programs to assist those wanting to enhance their employable skills by participating in the delivery of the program.

That's just one program of many around the province designed to help people get the nutrition they need to stay well. Ontario's Ministry of Health Promotion is running programs in northern schools to make fruit and vegetables available to school kids. The $900,000 pilot project in Algoma is giving about 12,000 elementary students three servings of fruit and vegetables a week until June of 2008.

Research by Cancer Care Ontario found 18- to 34-year-old men are some of the worst for not eating their fruit and vegetables. In partnership with XM Satellite Radio, the Canadian Cancer Society, Ontario Division and several regional cancer prevention and screening networks, Cancer Care Ontario developed different radio ads for men, women and children to get them to up their intake of healthy food.

Percentage of Ontarians with heart disease or diabetes who smoke daily or are obese, 2001, 2003 and 2005

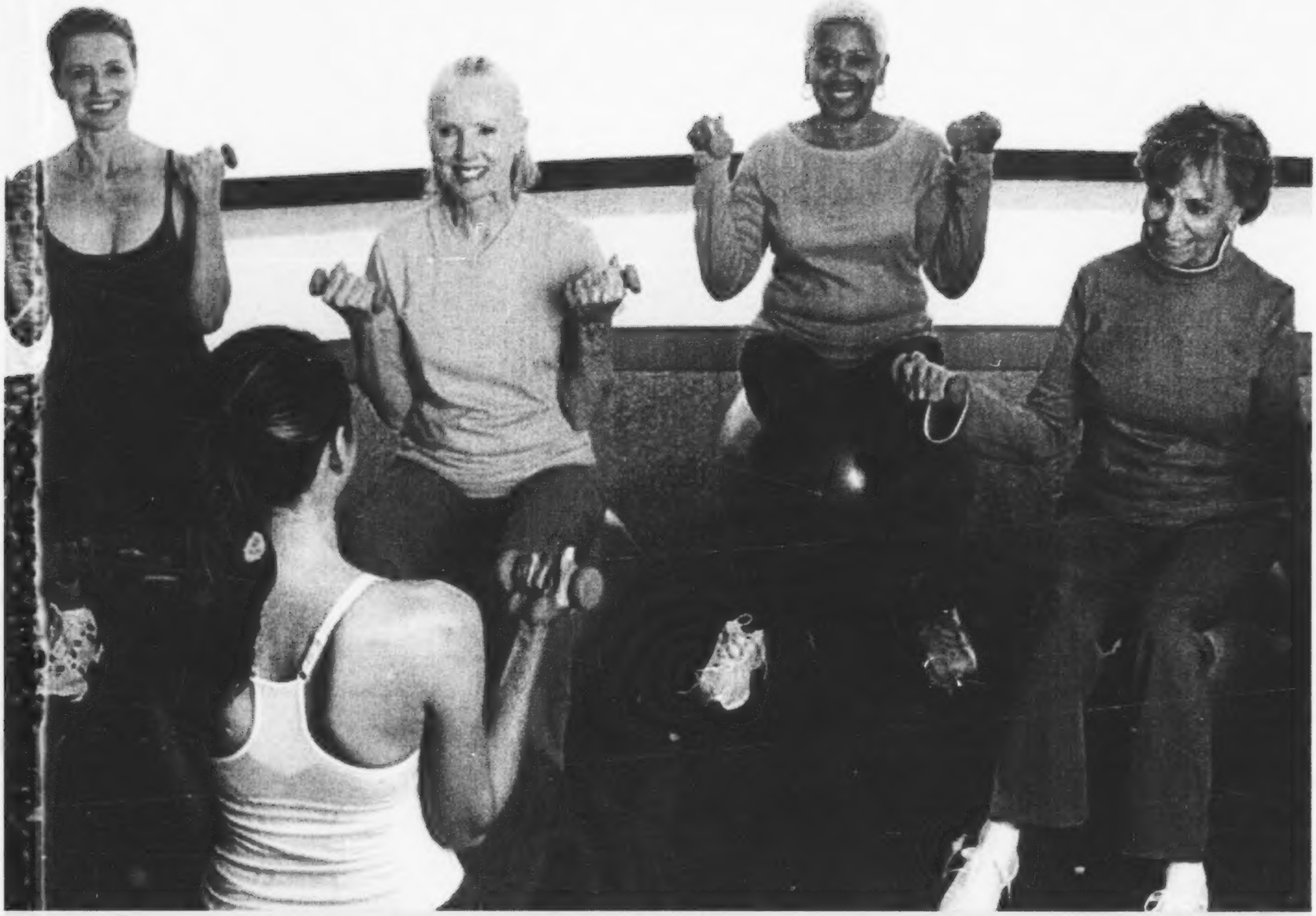


Source: Canadian Community Health Survey, 2005

We combined the data on obesity and smoking in people with heart disease and diabetes in one table to highlight the results. Almost one in four people with either diabetes or heart disease is obese, and close to one in six of them smoke daily. Smoking rates have decreased slightly and obesity rates have increased slightly. Overall, however, we conclude that little progress has been made in reducing the prevalence of these risk factors among patients already at highest risk. There is a clear opportunity for doctors and other primary-care providers to give advice, counseling and in some cases drug therapy to help these patients improve their lifestyles and increase their chances of living longer and more productive lives.

There are complex issues related to diet, income and community we need to understand better. Only some can be resolved by health care. Poorer people, for example, often have less access to sources of good food and places to exercise. In those cases, community initiatives to improve nutrition and increase exercise could make people much healthier. At the same time, we'd like to know more about why people with chronic conditions — most of whom get a lot of medical attention — still tend to be obese and to smoke. Are their primary-care providers putting priority on dealing with risk factors? We'll want to keep track of reforms in primary care and efforts to improve chronic disease management, to see if risk factors go down for patients with chronic disease.

Some answers may come from the Project for an Ontario Women's Health Evidence-Based Report Card, or POWER study, which focuses on the leading causes of illness and death among Ontario women, as well as their overall health, access to health-care services and the influence of other factors on health, such as poverty and ethnocultural background. It will release the first of a series of report cards in the spring of 2008. More information is available on POWER's website: www.powerstudy.ca.



You can't take ownership if you don't have the keys — learning to manage chronic illness

"Self-management" is often described as an important part of living with chronic disease. The phrase is easily said, harder to describe and quite difficult to live by. In essence, self-management means knowing your symptoms, what they signify and how to deal with them. A change in blood-sugar in a diabetic, for example, may call for a carefully chosen snack, or a shot of insulin. Sudden weight gain signals danger to a person with congestive heart failure, and perhaps a need for increased medication. Attention to diet and exercise benefit most chronic ailments, and often the patient is the best person to make sure rules for both are being followed. Self-management means doctors and nurses don't have to be around 24 hours a day to oversee a patient's health — and, more important, it gives patients some sense of control over their illness.

But managing your own disease takes training and experience. Both the techniques and confidence to do it must be learned. In a small northwestern Ontario town, the Dryden Area Family Health Team gives chronic-disease patients the keys they need to take ownership of their disease through their "It's Your Health!" programs.

When a chronic-disease patient is referred to the "It's Your Health!" program, a "patient navigator," who's a registered nurse, completes a health assessment. During a health assessment, patients set personal health goals and with the support of the navigator the patient determines the next step in their care. This is especially important for those patients presenting with numerous chronic illnesses. As they move through the process, the patient and team review the chosen goals and set new goals when the patient is ready and motivated to continue.

The program is divided into sections: Healthy Living (health promotion and prevention), Manage your Health (chronic-disease management and prevention) and Your Health Toolkit (individualized care). Healthy Living offers education on all aspects of maintaining health, including exercise, nutrition, screening for disease, immunization, diabetes prevention, the impact of stress and importance of relaxation, using medication safely, staying a healthy weight, quitting smoking and safe alcohol guidelines. Information on healthy new beginnings for pregnant women and new mothers is also available.

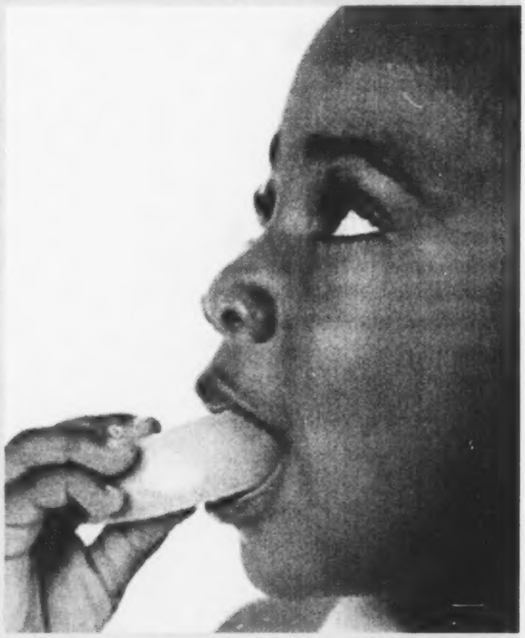
The Manage your Health section operates in group and individual settings. Patients with different illnesses, including chronic obstructive pulmonary disease, asthma, high cholesterol, hypertension, arthritis, and mental health concerns meet in groups to understand their illness and live a healthy life. Nutrition is a key aspect of all the programs, which is provided by a registered dietitian in the form of group and individual disease-specific counseling.

In the Your Health Toolkit section, patients have private appointments with various health-care providers on the team, based on their particular needs for extra support or monitoring.

Patients flow into and through the program based on their needs and a care plan developed as part of their family health team assessment. To date, the results of the program are positive and support the interdisciplinary model of care. Patients are accessing information and support to prevent and manage chronic disease and get the full benefit of mental-health primary services. In the first year after the program started, there were more than 1,200 "It's Your Health!" encounters, from group sessions to private individual appointments.

They included, for example, visits by the 542 patients registered in a hypertension program, offered in collaboration with the Heart and Stroke Foundation of Ontario. Ninety-five percent of the patients participating in the program returned for follow-up and are continuing to be monitored by the family health team as well as regularly evaluating their goals and confidence level.

At the 18-month mark of this program (July 2008), its impact will be evaluated along a number of measures. For example, for asthma and chronic obstructive pulmonary disease patients, changes lung function (as measured through spirometry tests) and the number of hospital and emergency department admissions will be assessed to determine the impact of the program.



2.10 Conclusions

Ontario's publicly funded health-care system is an enormous enterprise. It cares for more than 12 million people in a province that covers more territory than many countries. It provides services from the simplest of check-ups for a healthy toddler to almost unimaginably complicated life-saving surgery. It tends to people during acute short-term problems and supports the chronically ill through years of care. It employs thousands of people and accounted for $36 billion of the provincial budget last year.

For the most part, it is a system to be proud of. But it is not without flaws. Our mandate at the Ontario Health Quality Council is to report on the quality of the publicly funded health-care system and support its improvement. This includes describing what's working, pointing out where there are gaps in care and promoting quality-improvement programs at every level of care. This chapter is our overview of Ontario health care in 2007. We can't review everything, so we look at examples to assess whether what Ontarians tell us they want a high-performing health system to be — accessible, effective, safe, patient-centred, equitable, efficient, appropriately resourced, integrated and focused on population health — is being delivered.

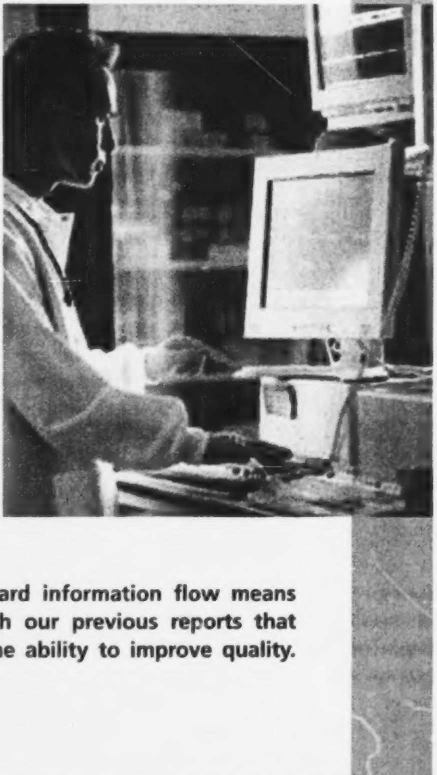
We're worried about access to all-important primary care, for the simple reason that it's the gateway to all care and a fundamental part of maintaining good health. A high proportion — 92 percent — of the people surveyed reported having a family doctor. But, although the Ontario government survey we used tells us about half the people without a family doctor don't mind that, we calculate at least 400,000 people in this province who want a family doctor are unable to find one. There was another, perhaps more worrying detail in our research. Almost two-thirds of Ontarians who do have a primary-care doctor can't get an appointment within two days when they need one.

Delays in care can lead to worse health problems. In other sections of this chapter, we look at children who have to return to emergency after being treated there for a severe attack of asthma, and care for people with chronic diseases. Primary care is key to managing chronic conditions in the young and the old. But if patients can't get timely care in the community when they need it, they can easily wind up in hospital. For children with asthma, that may mean repeat visits to emergency. Chronically ill adults whose heart disease or diabetes has not been controlled are hospitalized for many reasons, including heart attacks and strokes. This failure of primary care to meet needs quickly and effectively remains a serious concern for us. We will keep focusing on building quality in our primary-care system by strengthening its role in managing health problems before they become acute.

We found in our work this year that most people in Ontario think they're looked after well in acute care, emergency departments and by family doctors. That's good news. We're pleased to see a steady decrease in deaths from heart attack and stroke within a month of entering hospital. Organizations and individual health-care institutions have worked hard to give care for these conditions according to guidelines and are getting life-saving drugs to patients much faster than they used to. The difference can be seen in improved survival.

But some of the measures we use to assess the health system seem to show we're not meeting the standards set by experts as the best care possible. One that signals a problem is higher use of "Beers list" drugs by seniors who live in the community than by those in long-term care. These are drugs that are potentially dangerous to give to seniors, mainly because they can make them dizzy or confused and cause falls. They're used too often in all settings, but the rate is falling faster in long-term care. This is one example where we could use information technology effectively to improve quality. If we had electronic health records linked to pharmacy systems capable of warning against over-prescribing and dangerous drug choices for seniors, a whole range of problems might be avoided, although the question remains why they're used at all.

The whole issue of investing in information technology and management, from electronic patient records to effective data-tracking systems remains our biggest concern with Ontario's health system. We've made great strides in using videoconferencing and other telecommunication technology to give patients access to specialists and tests that aren't available in their region. Ontario residents are very supportive of the Telehealth system that helps them make decisions about what kind of health care to seek.



Health-care organizations in general, however, are doing a poor job of moving to effective electronic information systems. Spending across the province remains at 3.6 percent of total public spending on health, scarcely budging from the 3.5 percent of the previous three years, and far less than the 6.6 percent of revenue the financial industry spends on information technology and management.

We can't expect to keep improving health care without a revolution in our use of information technology. It is getting to the point where failure to adopt and use information systems is putting whole sections of the Ontario population at a disadvantage when it comes to health care. Unless you're treated in one of the biggest hospitals, or have a very progressive primary-care provider, your care may be suffering because haphazard information flow means important treatments and follow up are missed. We have said in both our previous reports that lack of electronic information systems is hurting patients and limiting the ability to improve quality. We still think so.

3

CHRONIC DISEASE MANAGEMENT IN ONTARIO

3.1 Introduction

Chronic diseases have a huge impact on our society. They are widespread, affecting one in three Ontarians. Among those aged 65 and over, 80 percent have at least one chronic disease and of those, about 70 percent suffer two or more.[41] According to the World Health Organization, 89 percent of all deaths in Canada are caused by chronic disease.[42] While the human suffering chronic disease causes is our biggest concern, World Health Organization research puts the cost of medical treatment for chronic diseases, and the lost productivity they cause, at $80 billion annually in Canada.[43]

There is plenty of scientific evidence about the types of treatments and monitoring that individuals should receive. Yet health-care systems around the world struggle with how to deliver the right care consistently. Canadian and international studies show that less than half of patients with diabetes meet their desired targets for blood sugar or blood pressure control. Many do not receive the right drugs, tests, or routine examinations. Only a small fraction of individuals get all the recommended treatments and monitoring.[44,45,46,47] As this chapter shows, Ontario is no exception: our health-care system fails to deliver the right care at the right time on a consistent basis. As a result, many Ontarians are suffering devastating complications or dying needlessly.

Chronic diseases are conditions that people live with for years. They include heart disease, diabetes, asthma and arthritis. These conditions tend to worsen gradually over time, and can cause pain, suffering, disabling complications or premature death. Although there is no complete cure for them, lifestyle changes, medical treatments and careful monitoring can reduce the risk of getting them, or slow their progression once they've set in.

Lucille Risannen — a long struggle to get along

A lifetime of looking after her family hasn't made it any easier for Lucille Risannen to look after herself. Lucille is an Aboriginal elder who has lived and worked in Thunder Bay for the past 55 years. She raised seven children and has 17 grandchildren. But now she's struggling with diabetes, hypothyroidism, angina, arthritis, heart disease, obesity and neuropathic pain. She also suffers from migraines, irritable bowel syndrome, high blood pressure and has a pacemaker.

With so many health problems, it's not surprising she can barely get out of the house. She says living with chronic illness and the limitations it puts on her is like "living in a jail." Nothing is easy any more — everything she does must be planned around her illnesses. Sometimes the neuropathic pain in her leg (caused by nerve damage from diabetes) is so bad she can barely walk by the end of the day.

Lucille says her diabetes and obesity have the most impact on her, emotionally, physically, and socially. Sadly, both problems are all too common among her people. In last year's report, we discussed the health of Aboriginal Ontarians. There's a great deal of research showing Aboriginal people have worse health than the majority of Canadians. They have three to five times the incidence of diabetes and twice the rate of heart conditions and breathing problems. They are also much more likely to be overweight or obese and have high blood pressure.

Poverty also plays a role in these health problems. With a large family to care for, the cost of supplies to manage diabetes — most of which are not paid for by health insurance — can prevent people looking after themselves properly. There were times early in her illness where Lucille had to decide whether to spend her money on rent, helping her kids or buying medication.

Often, medication was not the immediate priority. "It was hard to afford all of the medicine, later the needles and the [blood-sugar testing] strips." At one point she gave up taking her medication. She thought she felt better, but her doctor warned her she could collapse at any time, without warning, if she stayed off her drugs.

"My doctor told me that I may feel good now but that it wouldn't last, so I started taking my pills again. I feel like I have a choice to take them or not but I also know that if I don't take my medication and I get really sick, it will be my own fault, and I don't want to die… there are people here that still need me, and so dying is not an option."

Lucille keeps going with help from her family doctor and an internal medicine specialist. She says both are good listeners and explain things well, but there have been times over the years when she's felt at a disadvantage with doctors because she's Aboriginal. She would like to see more resources for native people who come from the north to get treatment in cities, addressing their need for community and social activities as well as their medical problems.

For herself, she'd like more education about her illness and to have more of her questions answered, but she is not comfortable in large groups, so she would enjoy a more personal or one-on-one approach.

3.2 Measuring high-quality chronic disease care

Defining quality

In this chapter, we examine two chronic diseases in depth: diabetes and coronary artery disease. Diabetes occurs when the body cannot use glucose (blood sugar) properly for energy. Type 1 diabetes emerges in childhood or adolescence and is due to the body's inability to produce insulin, the hormone that converts blood sugar to energy. Type 2 is due to the body's inability to use the insulin it produces properly, and traditionally emerges in adulthood, usually due to being overweight. Diabetes is a serious health problem because over time, the build up of glucose in the body damages tissue, causing blindness, heart attacks, strokes, kidney failure, skin ulcers and foot amputations.

Coronary artery disease is the most common type of heart disease. It is caused by a sticky substance called plaque building up in the arteries of the heart, which narrows them and reduces or even blocks the flow of blood. If allowed to progress, it can lead to heart attacks and death.

For both conditions, a healthy diet, regular exercise, weight loss and not smoking all help prevent the condition or slow its progression. Good medical care in the form of proper monitoring and the right medications can also help prevent the serious complications of these conditions. The table on page 89 lists some indicators of good-quality care we should be striving for, and a brief explanation for each indicator.

Jim Kitts — getting along with good guidance

Jim Kitts is an 83-year-old veteran of World War II who lives in the village of Temagami, where he settled at the end of the war. With a population just under 1,000, it's a place where everyone knows him — he served on the first town council, the school board and was active in the Royal Canadian Legion. But there's no hospital and it's small enough that getting health care can be a real challenge. Fortunately, Jim's had the help he needed to put together some pretty good care.

Jim's health troubles started in 1982, when, after years of persistent pain in his chest, he was finally diagnosed with coronary artery disease so severe he needed bypass surgery. Only then did Jim learn he'd already had two heart attacks; he'd dismissed them as exhaustion.

Seven years later, it happened again. On New Year's Eve, 1989 he had another heart attack and Temagami's volunteer ambulance drove him more than 60 kilometres to the hospital in New Liskeard, where he spent five days in intensive care. Jim says he's lucky he made it. Eventually, he was sent back to Sudbury, the closest major health centre, for another round of bypass surgery.

Jim credits his family doctor for his strong recovery from heart surgery. The cardiologists and specialists, far away in Sudbury, were not there to guide him through his rehabilitation. "Ever since my first heart attack, I've made it a practice to see my family doctor once a month," he explained. "I'd tell him my symptoms, and he'd keep me on track and encourage me to develop quite an exercise program. I had arm and leg exercises, and I walked as much as I could." On top of that, Jim — who worked at a desk — enjoyed demanding chores like chopping and stacking wood at his cottage.

The doctor also helped him live a healthier life in other ways. Jim had been a smoker "on and off" he says. He'd often quit, but all the men he worked with smoked at coffee break, and Jim would take one to stay and chat. He had a cigarette, he admits, right before he climbed on the stretcher to be rolled into his bypass surgery. He's off smoking for good now.

He hadn't thought too much about a healthy diet until his wife Aliette developed diabetes, 10 years before she died of cancer. When Aliette was first diagnosed, they went to an education program in Sudbury to learn how to follow a healthy diet, measure blood sugar levels and live a balanced life and Jim did a lot of their cooking.

But as Aliette's health deteriorated, Jim found he was eating more in restaurants, and his weight climbed. Recently, he's lost 25 pounds by watching the size of his portions. He makes sure he gets his five servings of fruit and vegetables every day and regularly visits the ambulance station, where they take his blood pressure and record it on a card for him, so his doctor can review it at their monthly visit. If it seems a little high, Jim will have it taken again, and call the doctor if it seems necessary. In effect, Jim's put together his own chronic-disease monitoring program.

For now Jim is very independent. He's still able to drive and manage his household with a bit of help from a local housekeeping service, plus support and services from community organizations such as Meals on Wheels and a transportation service that takes seniors to medical appointments in bigger towns. Most of all, he's enjoying life and says he's not ready to go yet.

"I can feel myself aging a lot in the past two years but I have no complaints. I'd like to live a little longer. I enjoy every day. I like a laugh every day. All the clubs and things I belong to, they know, if there isn't a laugh in it, I don't want to be there."

Diabetes indicators	Reason why it is important
Two HbA1c tests done in past year	HbA1c measures the average blood glucose level over the past three months. Careful monitoring can help identify sooner when a patient's blood sugar is too high, so that medication and lifestyle changes can be made to reduce blood sugar levels.
ACE inhibitor or ARB treatment discussed with patient[III]	Angiotensin converting enzyme (ACE) inhibitors help reduce blood pressure and reduce damage to the kidneys from diabetes. Angiotensin receptor blockers (ARBs) are an alternative for those who cannot tolerate ACE inhibitors.
Had a foot exam in the past two years	A regular foot exam can spot early problems with the skin which, if managed early, can prevent progression to foot ulcers and amputation.
Was screened for eye problems in the past two years	Regular screening can identify damage to the retina at the back of the eye from diabetes. If caught early, this damage can be treated with laser therapy before it spreads further.
HbA1c < 7.0%	Keeping the HbA1c (three-month blood glucose average) below this level has been shown to be associated with less damage to the kidneys and eyes.
Blood pressure < 130/80	Keeping the blood pressure at a very low level has been shown to reduce heart attacks, strokes, aneurysms, heart failure, kidney damage and death.

Coronary artery disease indicators	Reason why it is important
Statin treatment discussed with patient[III]	Statins reduce cholesterol, a large part of plaques in the arteries. Statins help prevent heart attacks, strokes and death.
ASA (aspirin) treatment discussed with patient[III]	ASA prevents blood clots from forming. Clots also contribute to plaque formation. ASA helps prevent heart attacks, strokes and death.
Beta-blocker treatment discussed with patient[III]	Beta-blockers help reduce demand on the heart and reduce blood pressure. They help prevent heart attacks and death.
Blood pressure < 140/90	Keeping blood pressure below this level has been shown to reduce strokes, heart attacks, aneurysms, heart failure, kidney damage and death.

[III] For this study, if a drug treatment was discussed with the patient, it was judged to be good care whether or not the patient actually took the drug. In some instances, patients cannot take a medication because of an allergy, side effect, or interaction with another drug.

Data source

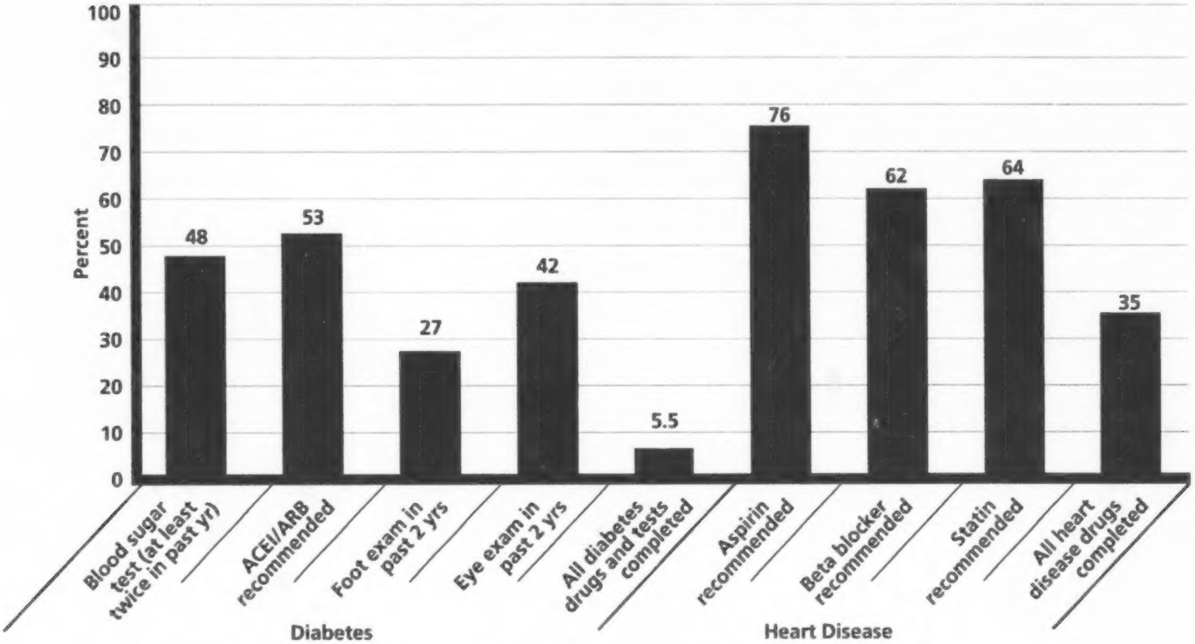
We used data from the Comparison of Models of Primary Care in Ontario study, led by the C.T. Lamont Primary Health Care Research Centre in Ottawa, to estimate percentages for each of these indicators. Researchers from Lamont manually reviewed charts from a sample of 4,108 Ontarians in 137 primary-care practices, to see if they were getting the right care. Roughly one-eighth of the patients in the sample had diabetes or coronary artery disease. The primary-care practices were voluntarily recruited for the study and were located throughout Ontario. For practical reasons, northern regions were excluded from the study. The data in this study were collected at a single point in time (2006) so we can't tell whether care is improving or getting worse. Ontario urgently needs the ability to regularly collect and report this type of data if it is to manage the system well. If this type of data is collected in the future, these results could be used as a baseline to judge if care is improving.

3.3 How well are we managing chronic disease in Ontario?

Overall management of diabetes and coronary artery disease

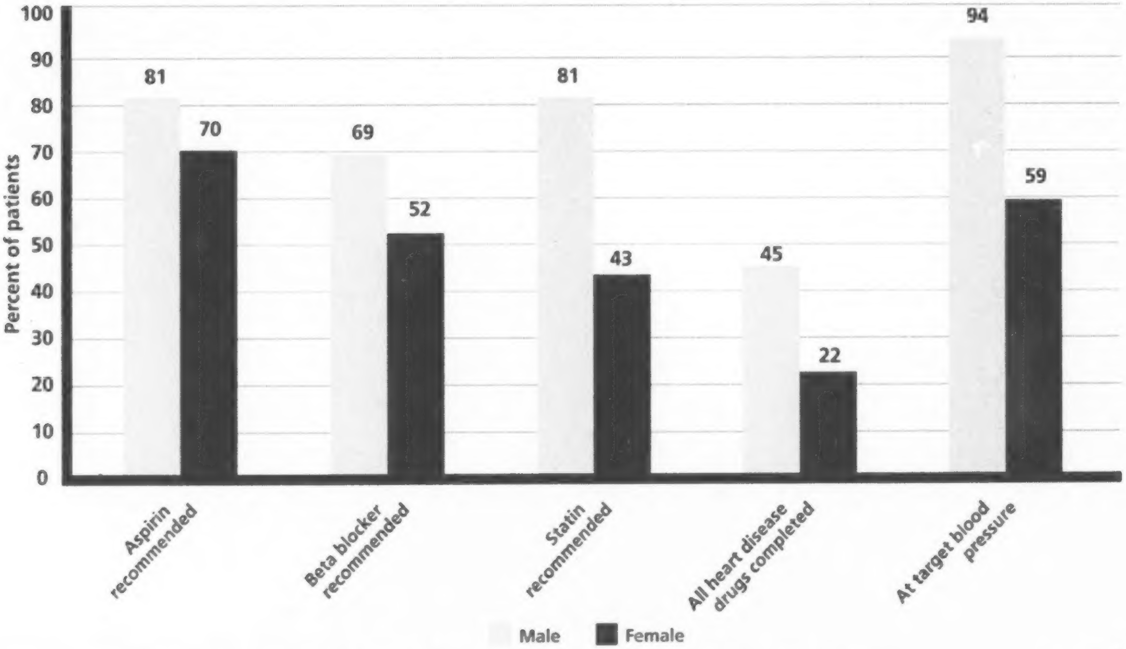
Overall, Ontario's health-care system is doing a poor job at managing chronic disease. Less than half of individuals with diabetes have their blood sugar under control. Most are not getting foot exams, eye exams or periodic monitoring of blood glucose frequently enough. Almost half are not getting the recommended ACE inhibitor or ARB medication. Only six percent of diabetes patients received all of the desired care at the same time.

Percentage of diabetes and heart disease patients receiving recommended drugs and tests in Ontario



Source: Comparison of Models of Primary Health Care in Ontario study; CT Lamont Primary Health Care Research Centre, 2007

Comparison of care for male and female heart disease patients in Ontario



Source: Comparison of Models of Primary Health Care in Ontario study; CT Lamont Primary Health Care Research Centre, 2007

The results for coronary artery disease are somewhat better than for diabetes, but there is still large room for improvement. Three-quarters of patients were recommended aspirin. Just under two-thirds of patients were recommended beta-blockers and a similar proportion was recommended statins. In theory, all patients with coronary artery disease should at least be considered for each of these three treatments. Only a third of patients were considered for all three drugs.

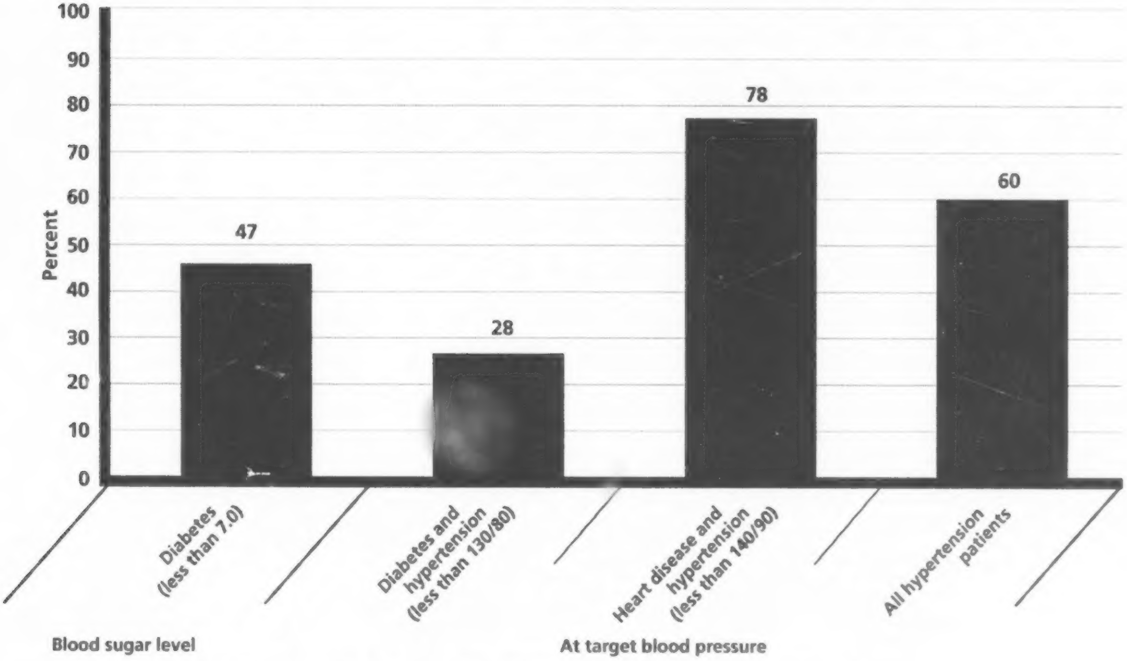
Differences in quality of care by gender

There were no significant differences in quality of care between genders for diabetes. However, for coronary artery disease, women were far less likely than men to be recommended the right medications, or to meet their targets for blood pressure control (see following table). This unequal treatment is particularly worrisome since we already know women don't get the same level of care when they go to hospital because of a heart attack or other cardiac problem. A recent study done in Ontario showed women are more likely to die following a critical event and less likely to be admitted to intensive care or receive certain life support treatments, even though more women are admitted to hospital.[48]

Quality of care for high blood pressure — the "silent killer"

High blood pressure affects about 20 percent of the general population, and 22 percent of people surveyed for this study. Most — 60 percent — whose high blood pressure had been diagnosed in the previous two years had blood pressure in the recommended range and 78 percent of coronary artery disease patients had blood pressure in the target zone. Patients with diabetes and high blood pressure don't do as well — only 28 percent were in the target range.

Percentage of patients diagnosed with diabetes, heart disease and hypertension who are within recommended targets in Ontario



Source: Comparison of Models of Primary Health Care in Ontario study; CT Lamont Primary Health Care Research Centre, 2007

3.4 Does how we organize care make a difference to patients?

Different models of care in Ontario

We wanted to do more than just look at how well we care for people with chronic disease — we wanted to find who was doing it best, and why. To do that, we compared four different models of primary-care practices, to see if any of them stood out for giving better care, or if any specific approaches they used seemed to benefit patients. At the time the study was done, there were four main types of primary-care practices in Ontario: the traditional fee-for-service doctors' offices, family health networks, community health centres and health service organizations. (A fifth model — family health teams — was under development as we were working and could not be evaluated. There are 150 of these teams at various stages of development across the province.)

Ontario is experimenting with different funding models for primary care because of the theory different types of payment encourage different types of care. Many experts believe that paying doctors by fee for service encourages treating urgent problems rather than prevention and chronic-disease management, and discourages them from working in teams with other types of health professionals, such as nurse practitioners, pharmacists or therapists.

Colborne — working together to give the care patients need

The Colborne Family Medical Centre in London has been caring for families, students and seniors since 1981. The practice has five part-time family doctors, two nurses and two receptionists. Why has the Colborne Family Medical Centre become a team practice, in a way that goes far beyond just splitting the rent?

Maybe it's because the women who work there (they are all women) share values and a similar approach to caring for patients, particularly the chronically ill. And they like to celebrate their birthdays together, too.

"For a team to work well together, you need to support one another, give and take information from one another and know that you will be doing the best you can for the patient," says licensed practical nurse Barbara Smith.

The five physicians at the Colborne centre are paid by the traditional fee-for-service method, and each has her own roster of patients. Less traditionally, they share the services of Smith and her part-time registered nurse colleague and of two receptionists, who are also active members of the team, making decisions about whether to bring in a patient to see a nurse or a doctor.

When it comes to patient care, being part of the team translates to the nurses doing much of the routine checks. If a patient is in for a regular physical, one of the nurses has already taken weight and blood pressure. If a diabetes patient has appointment, and a glucose test is needed, the nurse does that. All the latest information is in the chart before the formal appointment begins. Smith and her colleague also do all the phone calls to patients, whether it's to give test results or to tell them to adjust their medication. They also take calls from patients, get answers from the physicians and relay them.

But they work independently, too. If Smith sees a patient with high blood pressure in the waiting room, she'll check her blood pressure even though the patient is there for something unrelated. "If I haven't seen them for a while, I always just grab them and say, while you're here, let's check you out."

Knowing your patients well enough to know they haven't been in for a blood-pressure check in a while is part of running a patient-centred practice, which is one of the values the Colborne team shares.

In a patient-centred practice, looking after someone with a chronic illness means more than just treating symptoms. Good care means knowing a patient as a person, knowing their family, their environment and the

The other three models we looked at pay physicians differently, in ways that are intended to encourage teamwork, provide a broader range of care and put more emphasis on keeping people well, instead of just treating them when things have gone wrong. In health service organizations, physicians are paid by "capitation," where they receive most of their funding based on a core number of patients who have signed up with them. In family health networks, physicians are paid by capitation, plus a premium for patients who are not on their lists and performance bonuses (for high rates of vaccination, for example). Lastly, community health centres are run by community boards that decide not only what kind of health-care providers to hire, but what other services, from language classes to housing advocates, they need to offer. Everyone, including doctors, is paid by salary.

These four models differ in ways other than how they are paid. Community health centres were designed to serve groups who have challenges in accessing care. Thus, a higher proportion of the people they serve are low-income or do not use English as their language at home (see the table on page 96). The health centres are all group practices, give longer appointments, have more nurses and nurse practitioners on staff, and have the fewest patients per physician. Fee-for-service physicians had the fewest number of non-physician members on their teams and the lowest use of electronic patient records. Health service organizations had the most patients per physician.

challenges they face when it comes to managing their own illness. Colborne's professionals also believe, however, that accepting the reality of a chronic illness and taking ownership of self-care is the first step in developing a joint long-term care plan.

That said, Colborne refers patients newly diagnosed with diabetes to the Lawson Diabetes Centre, which does day-long education programs for adult patients and their families. At Lawson, patients start learning the skills to manage their diabetes care and how to take responsibility for managing their disease.

The doctors at Colborne use the province's diabetes flow charts to keep track of patients' test results and treatments. Following the flow charts brings patients back every three months for tests and monitoring, keeps doctors up-to-date with current guidelines and is a guide for making individual care plans with each patient.

Charts of risk factors are used to explain to patients why they need to change their behaviour around diet and exercise. Many of the doctors give their patients "homework" to encourage them to visit websites, or participate in exercise programs.

"I am a big advocate of exercise" says Dr. Pearl Langer. "I talk about exercise in a very informed and specific way, I always encourage and never give up. You have to know the patient, know what may stop them, know what their circumstances are, to promote the change. I prescribe exercise as medication. Start with 20 minutes, three times a week and then we will increase it. You have to work with the patient to overcome the barriers to success."

Occasionally patients having a lot of trouble controlling their diabetes are sent back to Lawson for a refresher, but most of the support they need comes from the Colborne doctors and nurses. Introduction of electronic medical records should make managing chronic disease even more efficient. That was to happen in April, starting with a switch to electronic appointment scheduling. Electronic medical records were to follow.

Key differences in practice characteristics between community health centres and three other models of primary care

	Community health centre	Fee for service	Family health network	Health services organization
Percentage of patients with income under $35,000	51	26	30	33
Percentage of patients where English is not language at home	17	7	3	1
Percentage with solo family physician	0	26	37	38
Percentage of practices with a nurse practitioner	100	9	37	19
Average number of nurse practitioners per practice	2.5	0.1	0.3	0.2
Number of patients per doctor	1300	1800	1400	2000
Booking time for routine visit (minutes)	25	13	13	14
Percentage of practices with electronic patient records	29	14	57	44
Number of other health professionals[IV] per doctor	1.8	0.3	0.64	0.75

Source: Comparison of Models of Primary Health Care in Ontario study; CT Lamont Primary Health Care Research Centre, 2007

Differences in quality by model of care

Overall, care for diabetes and coronary artery disease was better at community health centres. Their patients are receiving almost three-quarters of the recommended drugs and monitoring tests,[V] while the other three models delivered 55 to 59 percent of the recommended drugs and tests. Care is better in particular for diabetes; 30 percent of community health centre patients received all of the recommended care, compared to only four percent of fee-for-service practitioners.

Although community health centres were much better at delivering recommended care, their patients were no more likely to have their glucose under control (according to HbA1c tests) than patients in any other kind of practice. Why? One reason is patients in community health centres are more likely to be poor or to have a language or cultural

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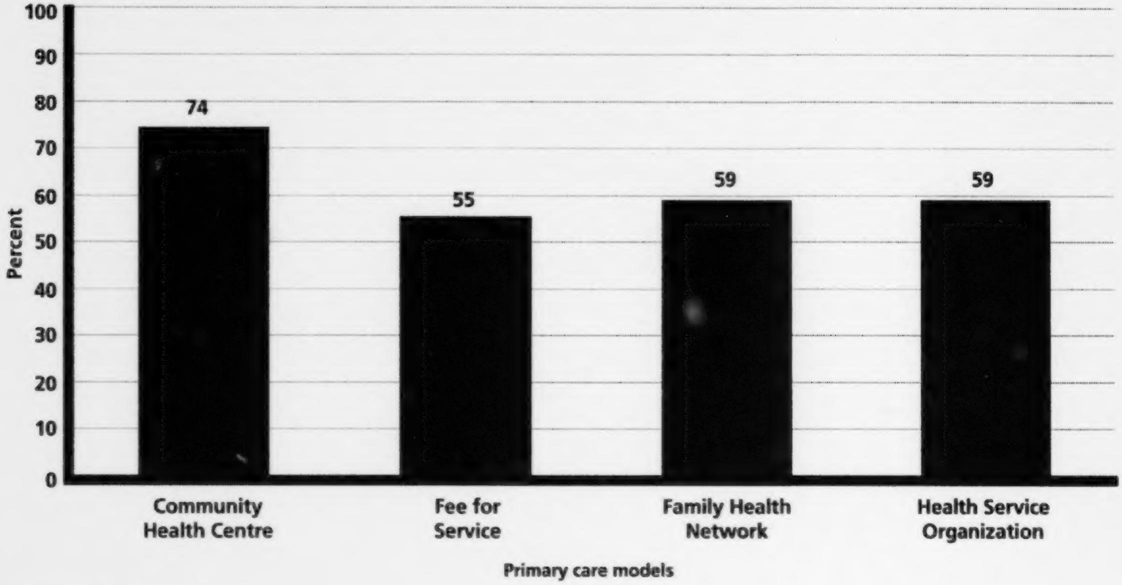
[IV] Chiropodist, pharmacist, nurses and nurse practitioners

[V] The total number of recommended drugs and tests was calculated by multiplying the total number of diabetes patients in the study by the number of drugs and tests each patient should have received. The same was done for CAD patients. This was then compared to the actual number of drugs and tests these same patients received.

Percentage of recommended drugs and tests delivered to Ontario's diabetes and coronary artery disease patients by model of care



Note: Data is age- and sex-adjusted
Source: Comparison of Models of Primary Health Care in Ontario study; CT Lamont Primary Health Care Research Centre, 2007

barrier to getting care. So it's possible they cannot follow recommendations for better diet and exercise or afford medication. If that is the case, the community health centres may actually be doing very well to get the same results as practices with more affluent and better-educated patients who are better able to look after themselves.

Differences in quality by characteristic of practice

We used a statistical technique called regression analysis to see if there were any factors related to how care is organized that appear to influence quality. We tested several possible factors, including the size of the practice, team composition, and use of information technology. Using these methods, we found that having a nurse practitioner in the practice was the single biggest factor associated with higher quality of care; practices with nurse practitioners had a 10 percent higher rate of ensuring patients got the right drugs, tests and examinations than practices without nurse practitioners. Research also tells us that nurse practitioners tend to focus on supporting chronically ill patients with health education and counselling for diet, exercise and tobacco use.[49]

Interestingly, we found that practices with electronic medical records did not have higher scores for quality. In theory, electronic medical records can help practitioners monitor their patients more closely, create reminders of when a test is due or which drugs should be ordered. It takes time and money to introduce computer-based systems to an office and develop the expertise to use them effectively. One possibility is that many of the electronic medical record features that would enhance chronic care are not being used.

How do community health centres do a better job on chronic disease management when they have a tougher population to look after? One reason is that they use more resources per patient: there are fewer patients for each doctor and more other types of health-care workers working with each family physician. Not surprisingly, community health centres spend more to deliver care to the chronically ill than the other models. That may just be the price we have to pay to serve the most vulnerable people in our society.

Still, we need to do more research to find out the appropriate number and mix of providers for the rest of Ontarians. And we should not be complacent: even in community health centres, only 30 percent of diabetes patients were offered all four of the recommended interventions.

York Community Services — a broader perspective on what makes people healthy

It just makes sense. All kinds of different people with a wide variety of problems — some medical, some not — need many different types of care, and a whole lot of different care providers. York Community Services (YCS) in Toronto has been around for 35 years, trying to meet those needs. Along with primary health care, the centre provides legal aid, housing and other services. It works with the Centre for Addiction and Mental Health to offer a mental health program. Social work, housing and even dental services are available on site.

We looked at YCS because it's a community health centre, the primary-care model our research found gives the best care for chronic diseases. Chronically ill patients in community health centres get almost three-quarters of the recommended drugs and monitoring tests (compared to 55 to 59 percent of recommended care in the other three models).

Community health centres also feature a mixed staff of physicians, nurse practitioners and other health professionals — and our research shows having a nurse practitioner in a practice is the single biggest factor associated with higher-quality care. Practices with nurse practitioners had a 10 percent higher rate of ensuring patients got the right drugs, tests and examinations than practices without nurse practitioners.

But YCS's focus, as we've seen, isn't limited to health care. Its work is based on the understanding that a range of factors, including housing, employment, social connections, income and bio-logy and gender and race, which we call the determinants of health, all affect whether people are healthy. Among a vulnerable population, such as YCS serves, it's common to have to deal with many types of needs to keep someone well.

YCS services are focused on newcomers to Ontario, mostly people from Central and South America, the Caribbean, East Africa and South-East Asia. They also serve large Italian and Portuguese communities and have staff members whose job is to support people with mental-health issues living in the community. By having staff on hand to help people cope with all the troubles of day-to-day life — troubles they face because they're poor, or newcomers, or outsiders of some kind — YCS is trying to make the population it serves more healthy overall.

At the core of YCS's work as a community health centre is its team of three full-time doctors and, as of spring 2008, four nurse practitioners. They also have two lab assistants to do tests and two chiropodists. But there are also five social workers, three health-promotion workers and administrators funded by the Ministry of Health and Long-Term Care.

Steven Harrison, the centre's executive director, explains they don't assign patients to a particular pairing of a physician and a nurse practitioner. Instead, patients are seen by staff best suited to their needs. One of the physicians, for example, focuses much of his time on learning about and treating mental illness — but if one of his patients also had diabetes, he or she would see a nurse practitioner with expertise in that, where a patient with heart problems would see a different nurse. And, over time, the mix of caregivers can change.

Once a month for three hours, the whole team — including people from all the other services YCS offers, such as legal aid and housing — holds its case management meeting during which every patient's case is covered. For many, there's nothing new to report, but for some it's an important chance to make links between a health issue and recent unemployment, or a housing or legal problem.

Harrison says the case management meetings mean "the five percent or so who would fall through the cracks" get better organized care. "Generally, when your personal life is falling apart, the last thing you would do is go to see the doctor about a health problem." However,because YCS's electronic scheduling is open to all (unlike the electronic health records, which only care providers can see) social workers and health-care providers can concentrate appointments on one day, co-ordinate follow up, and ensure the client gets a hot meal, too.

YCS's programs are as diverse as its population. There are group programs such as diabetic education, pre-natal classes and breast-feeding support. There are parenting lessons in Spanish, a community kitchen to learn about healthy cooking on a budget, a Vietnamese support group and a program to help street people find permanent homes. All share the same goal as the primary health-care YCS offers: giving clients everything they need to live the healthiest lives possible.

The centre's value, according to Harrison, lies in the "strong link between our counselling and health-care services. We really do use the holistic approach the best we can. In order for a community health centre to be successful, it must have services applicable to the specific population it serves."

3.5 The case for spending to improve chronic-disease management

Chronic diseases put a huge burden of suffering and early death on Canadians. Health Canada, in an effort to estimate the damage chronic diseases do to the economy, calculated costs for diabetes, cardiovascular disease and mental health conditions. By combining estimates of spending on health care with "indirect costs" such as lost productivity, it concluded the annual cost to Canada of diabetes to be $9.9 billion, of cardiovascular disease to be $20.6 billion and that mental health conditions cost $34 billion. Based on Ontario's share of Canada's population, we can assume that about 40 percent of that cost applies to this province and these three conditions combined cost Ontarians over $25 billion per year.

That's a staggering amount and, as the data show, far higher than it needs to be. We are not doing a good enough job caring for people with chronic illnesses. Only about half the evidence-based treatments recommended by experts are being performed. Inevitably, giving people half the care they should be getting leads to painful, sometimes fatal complications that often could have been avoided. Complications of diabetes and coronary artery disease include heart attacks, strokes, amputations and premature death. In addition to the impact on patients' lives, these complications cost a great deal of money to treat and damage economic productivity as well.

There's no question, high-quality care for chronic disease costs money. We wanted to show it's worth the investment. To make the case for investing in quality improvement in chronic disease management, we estimated the number of complications that could be avoided through optimal use of six interventions recommended for patients with diabetes, coronary artery disease, or both (see Table 1).

Details of the methodology are on our website, but briefly put: we calculated the number of patients who have these conditions and estimated the percent getting proper care, using the data in the preceding section. Then we estimated a reasonable target for the proportion of patients who should get these interventions, based on expert advice or the best results reported anywhere in the world. (Targets are usually less than 100 because not every intervention will work in every case.)

Table 1 shows the number of Ontario patients we calculated should be getting an intervention but are not. With that, we went to the scientific literature, which tells us the number of complications that could be avoided, on average, for each properly-treated patient. That allows us to estimate avoidable complications [illegible] Table 2).

Table 1. Avoidable complications of diabetes and coronary artery disease

Intervention	Types of patients who should get intervention	Number of Ontarians with condition (in column 2)	Estimated percentage of patients getting intervention	Possible target percentage	Number of Ontarians getting sub-optimal care
Beta-blocker	Coronary artery disease	385,000	63%	85%	88,000
ACEI / ARB	Coronary artery disease or diabetes	1,034,000	55%	75% to 85%*	243,000
ASA (aspirin)	Coronary artery disease or diabetes	1,034,000	62%	90%	301,000
Statin	Coronary artery disease or diabetes	1,034,000	48%	70%	231,000
Good blood pressure control	Coronary artery disease or diabetes	1,034,000	52%	75%	234,000
Good blood sugar control	Diabetes	802,000	47%	70%	185,000

ACEI — angiotensin-converting enzyme inhibitor

ARB — angiotensin receptor blocker

ASA — acetylsalicylic acid

**85 percent if coronary artery disease; 75 percent if diabetes alone*

Table 2. Number of complications avoided if treatment targets were reached

	Heart attacks	Coronary bypass operations	Balloon angioplasties	Stroke	Amputation	Avoidable deaths
Beta-blocker	797					952
ACEI / ARB	1,168	560	560	730		876
ASA (aspirin)	522			119		176
Statin	2,401	87	77	2,253		4,270
Good blood pressure control	1,501			1,065	203	1,132
Good blood sugar control	1,693				166	538
Total, Ontario	**8,083**	**647**	**636**	**4,167**	**369**	**7,944**

The results are sobering. If we could improve the amount of evidence-based care — already known to work and recommended by experts — by relatively small amounts we could save enormous amounts of suffering. Just in one year, just in Ontario, we could avoid 8,000 heart attacks and 4,000 strokes. There would be 369 fewer amputations and we would preserve almost 8,000 avoidable deaths each year. We could also avoid hundreds of heart surgeries — more than 1,200 cardiac bypasses and balloon angioplasties (which clear plaque from blood vessels).

These results can be improved. Many other provinces are investing heavily in quality improvement in primary care. Saskatchewan, British Columbia and Alberta have all established "learning collaboratives" for primary care providers aimed at improving chronic diseases. In a collaborative, participating teams work on a common quality improvement aim and meet periodically (typically four times in one year) to share experiences on how best practices were implemented. British Columbia was the first to introduce this methodology to speed the uptake of best practices among multiple sites. Different topics for improvement have included diabetes, congestive heart failure, prevention, depression and chronic kidney disease.[50] Saskatchewan's collaborative has focused on coronary artery disease, diabetes and improving access[51] using the advanced access techniques mentioned in section 2.1.2. Alberta has had strong success with implementing advanced access in many sites, particularly in the Chinook Health Region, and its current Access Improvement Measures initiative is focused on spreading improvements in access and clinical care across the province.[52] Both Saskatchewan and British Columbia have chronic disease registries for patients with many different types of chronic conditions.

The danger of laying out this kind of data on a chart, and making these kinds of calculations, is that it can minimize the suffering these numbers represent. These complications hurt individuals and their families. Often their lives are never the same. They hurt the rest of us too — money, workers and other health-care resources used to deal with avoidable complications cost us all money and may keep Ontarians from getting care they need. In the Speech from the Throne given on November 29, 2007, the provincial government noted more Ontarians are struggling with diabetes and promised to introduce "a new comprehensive diabetes strategy." At the time of writing, we still await that strategy.

We want to close by noting there are many reasons Ontarians are not getting all the care they should; it's not just a case of overworked physicians being unable to keep up with demand, although of course that's a part of it. As we've said, redesigning how care is delivered, to encourage team work, regular monitoring and faster access when patients need care would improve chronic illness care. And we'll say once again that we can't manage care well without effective use of information technology. Those two factors alone would combine to make it infinitely easier to help patients manage their own illness.

But there are other issues, too. Without good computer systems, it's impossible to support primary care providers with information about what's effective and what isn't, or to measure how individual physicians or organizations are doing in meeting targets and improving health. Better data is necessary to analyze different types of care to understand why it varies from place to place or brings different results.

Often, actions and policies that would make a difference to the overall health of the Ontario population aren't given sufficient funding or political commitment. And sometimes the necessary actions and policies are outside the health system, addressing factors such as income, education and environment. All of these must be considered to create a high-performing health system capable of delivering care of the highest quality.

Ashley Thomson — managing care without support

↑ Waiting Area

Diabetes is never easy, but growing up with the disease, having it part of your life from childhood, vmay make all the testing and the needles and the decisions about food and exercise come a little more naturally. Certainly, 24-year-old Ashley Thomson is used to managing her disease — but it's still been a struggle having to do that with no family doctor to back her up since she moved to Pembroke last year.

It helps that Ashley's diabetes is very stable. The medications, targets and dietary restrictions that were set for her when she was diagnosed have essentially not changed. And, as she says, when you've been diabetic for a long time, you know what to do.

"When I was in southern Ontario, and then when I moved up north, I spent a lot of time with the dieticians and nurse practitioners, and they tell you targets. Also, I volunteer with the Canadian Diabetes Association, so I'm pretty well-informed. You can access all the information you need if you're proactive enough to do it."

Two of Ashley's grandparents died of diabetes and her mother had a borderline case all her life, so it was not a big surprise when the little girl was diagnosed at the age of 12. Because Ashley's mother had always watched the family's diet, and limited sweets, lifestyle changes were not that extreme. After her diagnosis, Ashley learned how to test her blood and give herself insulin, then she went back to her regular life, swimming, going on school field trips and just being a teenager.

It wasn't easy — she wasn't the only kid in school with diabetes, but she had to give herself needles every time she ate, and that did make her stand out. Teenagers hate that, but Ashley worked at being open about her diabetes so people would understand the illness better. "People still have a stigma around someone needing to take needles for their illness," she says.

She hasn't always been a model patient, however. When she left home for college at 19, she rebelled. It was her first time away from home, with no parental supervision, and none of her friends had diabetes. She didn't want to, either.

"I never stopped taking my insulin, but I didn't test my blood, I didn't get my eyes checked for two years, I patied and drank alcohol." It was behaviour that put her at high risk for complications, and after two years, she gave it up. "I was tired of feeling awful all the time," she explains. "When my blood sugar's high I am the meanest person you ever met, I'm tired all the time and I'm cranky."

Back on track, Ashley was well enough when she finished college to move to the Northwest Territories for a year, where she worked hard at finding understanding doctors to support her care. But when she came back to Ontario for a job as a news anchor and reporter with a radio station in Pembroke, she encountered a new problem. She couldn't get a family doctor.

When Ashley first arrived in Pembroke, she went to the walk-in clinic to get prescriptions for her medications, but found it closed, so headed to emergency instead. She waited three hours to get prescriptions — and she didn't feel welcome. The doctor told her that she should have found a family doctor to manage her care.

There's a serious shortage of family doctors in Pembroke and the surrounding area. Ashley's friends with diabetes mostly go to Ottawa — about a 90-minute drive away — to get care. She wanted someone closer, but pleading with doctors' offices in Pembroke and calling towns all around did no good. No one would take her on.

Finally, she broke down. She'd been waiting seven-and-a-half hours in emergency in Pembroke, waiting to get her prescriptions renewed. She couldn't bear it anymore and she started to cry. This time, the doctor on call went to bat for her. He called another family physician, who has diabetes, at home on the weekend, and talked him into taking Ashley as a patient.

"I'd called his office more than once, but I couldn't get past the receptionist. I was saying, 'Listen, I have juvenile diabetes, I'm not someone who just thinks they're sick all the time, I'm young and I don't want to get complications, don't ignore me,' but they did."

It was pretty bad, having to hit rock bottom before she could get help, but she's doing fine now — still managing her own care, but knowing she has back-up.

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